

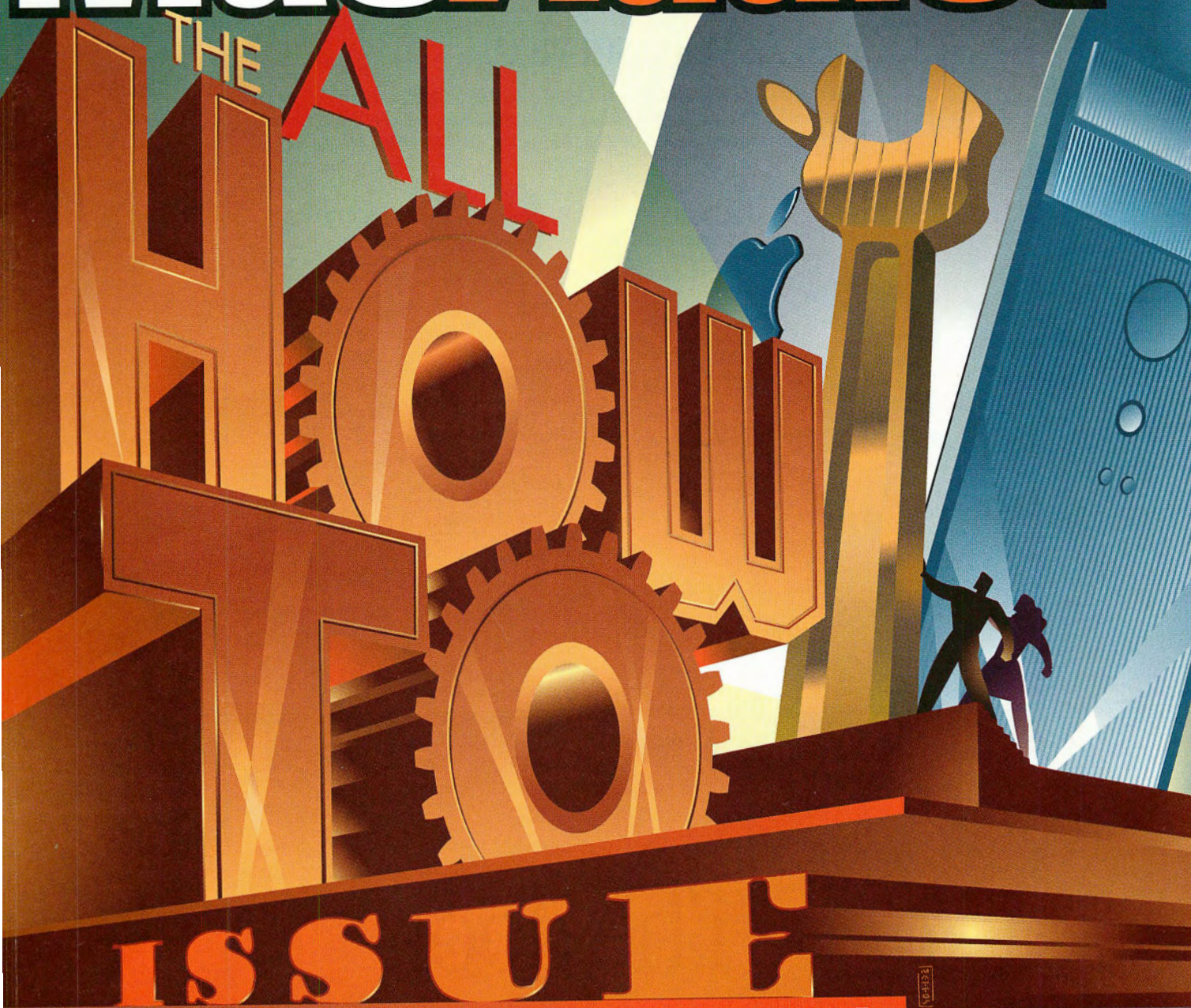
GRUDGE MATCH: G4 vs. 1GHz ATHLON

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JUNE/00

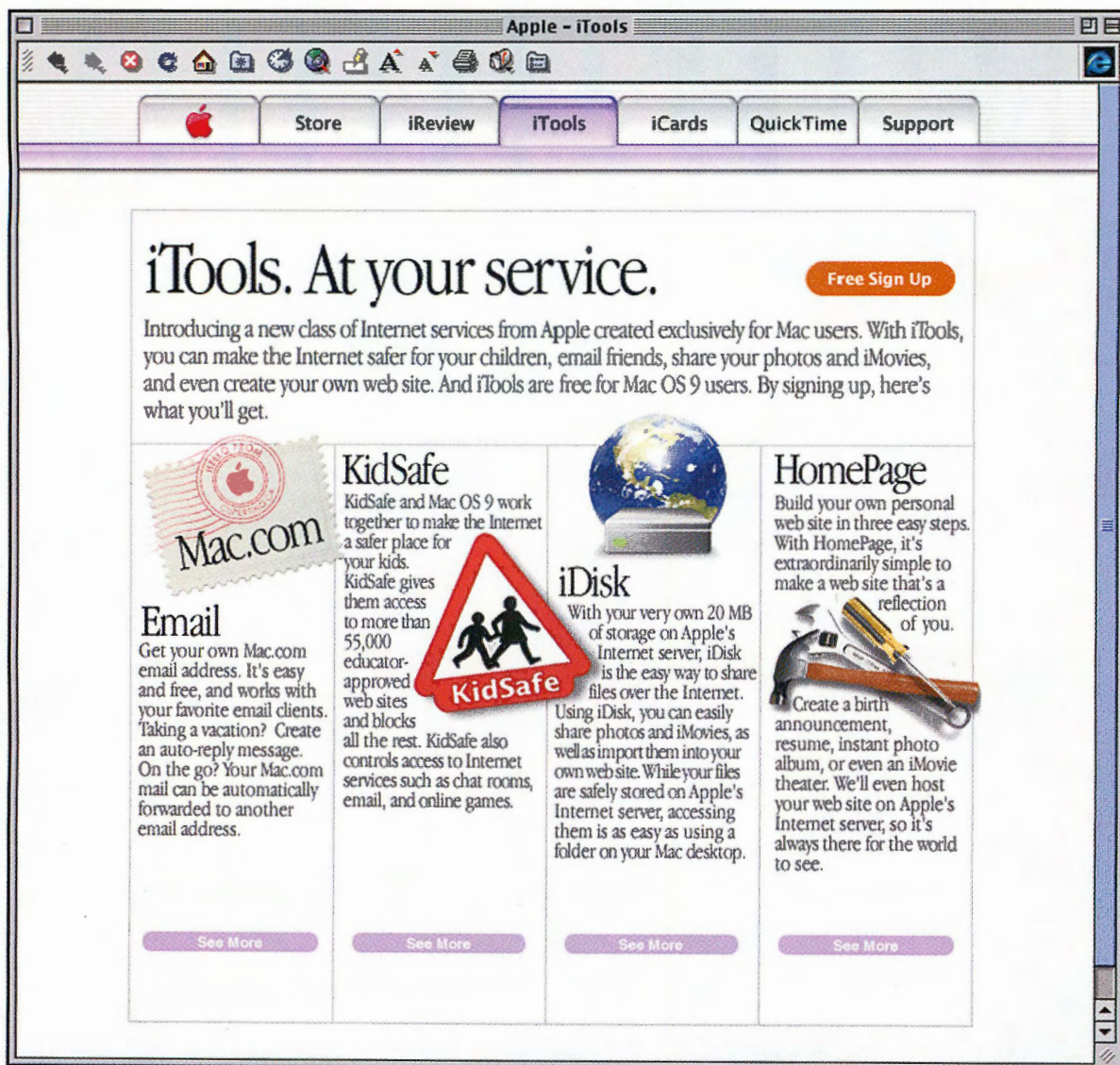
MacAddict



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Reviewed: New PowerBooks, Director 8, AppleWorks 6





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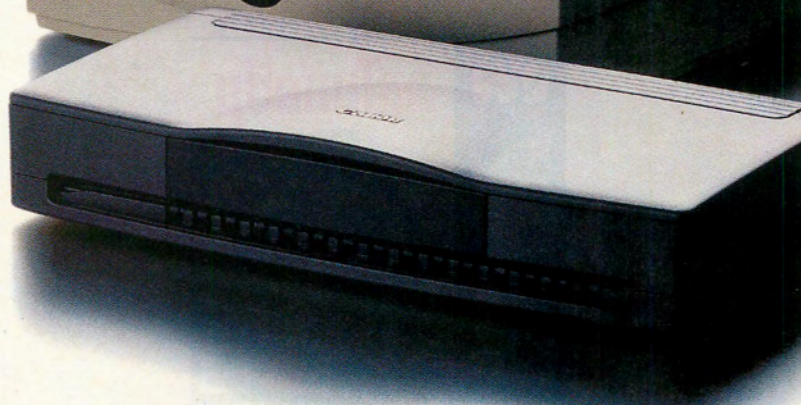
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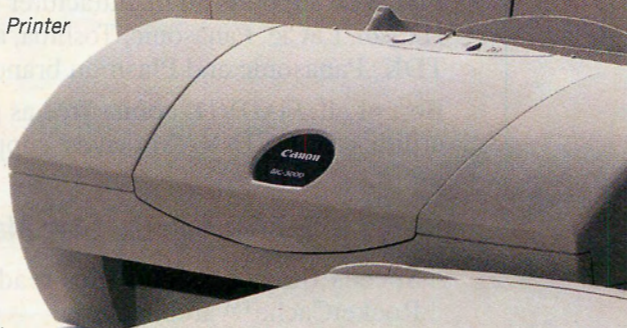
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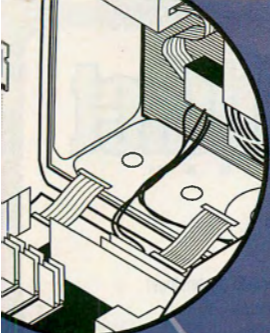
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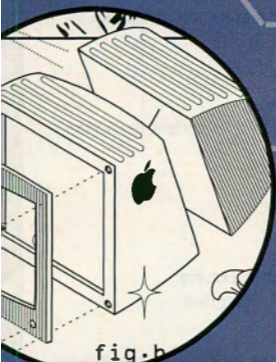
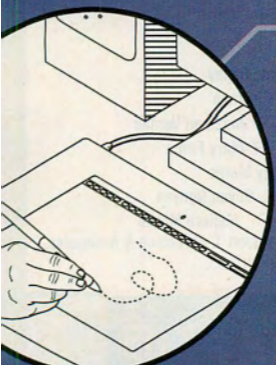
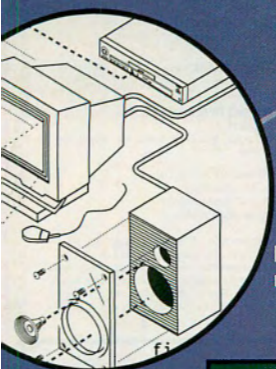


fig. b

THE CRT BONE'S connected
to the shadowmask bone...

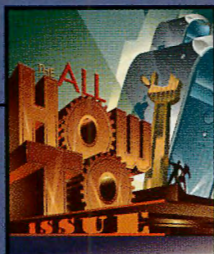


HOW TO CATCH A FLY on
your tablet with chopsticks...



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JUNE 2000

MacAddict

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do-it-yourself everything

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Manage your memory! Prepare for the arrival of OS X! Speed up your startup and more! Here's a guide to keep your Mac purring louder than the happiest kitten on earth.

36 Hardware

Rig your house for Ethernet, or just bask in the warm glow of a few dozen reminders to ground yourself before working inside your machine—we've got you covered on the hard stuff.

40 Games

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52 Internet

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REPRINTS

For reprints, contact RMS at 717-399-1900.

Volume 5, Issue 6

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12 Editor's Note

I hope my mom doesn't read this.

14 Letters

It's your section—we just add funny headlines.

18 Get Info

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112 Shutdown

Laugh at someone else for a change.

A SNIPER at every intersection...



...and all through the night, not a creature was stirring, not even an Associate Art Director. Max has a soft spot for bouncers...on his leg!



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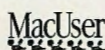


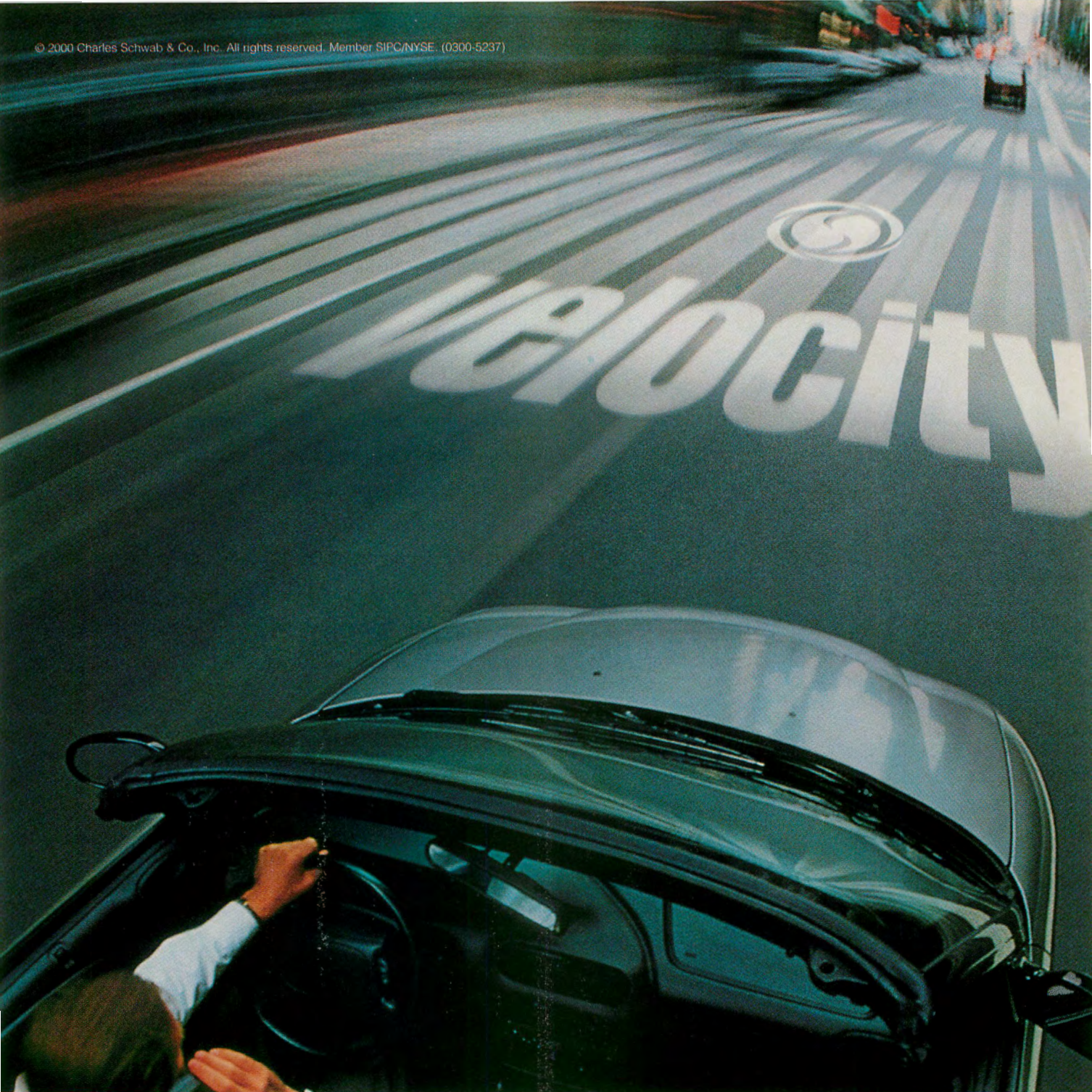
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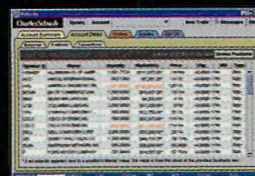
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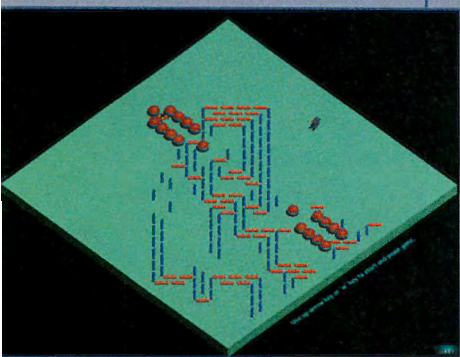
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MAKE THREE RIGHTS, a left, and a what?

the disc



School's out! Use all that extra time on your hands to tackle these trials!

highlights



Alchemist 1.0

You won't have to break out your periodic table to solve this puzzle, but you will have to put on your thinking cap. Fit the Alchemist's tools into the correct pattern, and they'll disappear! Place the beakers and baubles carefully on the board, or they'll stack up and get you later. Dig the atmospheric music in this game of wits.



StarGazer's Delight 4.5.1 e

You won't need a telescope to see the stars when you have this program on your Mac! Indicate a time and place you'd like to see the sky, and choose planets, stars, constellations, and Zodiac signs—animations will move across your field of view through hours or days according to your selections.



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Take a gander at this great trial of FreeHand 9 and create away! Layouts, mock-ups, and drafts are no threat to this program. Create graphics and publish them as HTML pages using FreeHand's HTML assistant. Import or export images into just about any file format you can come up with. Manipulate, tweak, and produce great Web or print graphics now!



Ricochet 3d

Your head will be a mess of directions trying to beat this game. Guide the "runner" over multiple targets using red and blue deflectors to change direction—a simple concept, but a challenging task. But beware—bumpers, holes, and breakers will throw you for a loop. Go little guy, go!



DAVE? DAVE? I WOULDN'T do that if I were you, Dave. Okay, the iBorg isn't exactly HAL, but you'll finally see the conclusion of *Not One Peep*, our epic staff movie. Find out the identity of the *MacAddict* Blueberry iBook thief! Will we ever learn the identity of the woman in red? You'll never look at Easter candy in the same way again!

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editor's note

I wanna rock 'n' roll all night and part of every day!

I hated studying history in high school. The classes were boring, the teachers predictable, and the information impractical. Four years of these classes exist in my mind as a blur of dates and long-dead political paradigms. Oddly enough, however, history is now one of my favorite subjects. I rabidly consume books about World War II, ancient Japan, and turn-of-the-century tobacco trusts.

You're all probably wondering how I'm going to turn a self-absorbed rant about high school History class into a metaphor for the Mac. Well, it's simple: The reason I didn't like history when I was 17 was because of the way it was presented. High school textbooks rob history of its excitement and intrigue. They dumb it down, make it plain. They editorially approach subjects as though all the stuff they're talking about is too complex for your little brain, so you should just take the sanitized version of events and accept the fact that you're probably not smart enough to understand any more than that. Public schools do this, of course, because they have to cater to the least common denominator. I understand the educational theory behind this method; I just think it's a dull, discouraging way to learn about something. This is the same thing I don't like about PCs.

The Mac is a tool anyone to use to do anything computer related. Sure, the operating system is designed to be easy to use, but it doesn't dumb itself down to appeal to the least common denominator. The Mac is accessible, without being limiting. It doesn't expect you to be a computing genius, but if you are, well, that's fine too.

Common denominator assumptions are also something I despise in computer magazines. Too often a publication will assume that unless you're a professional photographer you're not going to understand Photoshop, or unless you work full time on video you won't be able to follow an how-to on non-linear editing. Such logic polarizes a publication's content. If you see a Photoshop tutorial, you either get esoteric tricks for using Multiply layers, or a guide to basic cropping.

Here at *MacAddict* we like to assume that anybody can do anything. Even someone who only uses their Mac for email and recipe filing can hop into Director and

build a video game, if so inclined. All it takes is the inspiration to do so and a set of instructions written so you can understand them. The Mac, after all, is the quintessential tool, and the more you use it, the more you'll get out of it.

SeeMeBuyMe

This issue marks the launch of a new feature in *MacAddict* called SeeMeBuyMe. Accompanying each review or product-specific article, you'll find an product identification code, along with the SeeMeBuyMe URL and phone number. You can locate the product on our partner SeeMeBuyMe's Web site (<http://www.seemebuy.me>) to find more information about a product as well as links to places where you can purchase that product online. (You can also buy these products via the phone number). It's important to point out that neither SeeMeBuyMe nor *MacAddict* actually sells anything (well, except this magazine, in the latter's case). Feel free to drop us a line at letters@macaddict.com to let us know what you think.



I'M NOT wearing pants.

Staff Rants

They Walk! They Talk! They Think for Themselves! They're the *MacAddict* Staff!



Niko Coucouvanis,

MacAddict.com Producer Guy

Q. What was your favorite subject in high school?

A. Um, recess. No, that was grade school. Lunch.

Q. Have you ever gotten way too ambitious with your Mac?

A. I think I created a virus once when I was trying to make a DHTML version of the magnetic poetry kit. Some Netscape preference began replicating itself so fast, I watched the available space number in my open hard drive window tick down to under 1MB before pulling the plug.



Rich Pizor,

Online Content Editor

Q. What was your favorite subject in high school?

A. I was told that lunch didn't qualify, so I had to settle for British Literature—and only because the teacher let us play poker with extra-credit points.

Q. Have you ever gotten way too ambitious with your Mac?

A. My current Mac is way too ambitious....I think the only components left that actually shipped with the thing are the startup drive and one of the RAM modules.



Narasu Rebbapragada,

Associate Editor

Q. What was your favorite subject in high school?

A. Biology. I killed fruit flies with ether, put a cockroach in someone's shoe, and refused to dissect fetal pigs on moral grounds.

Q. Have you ever gotten way too ambitious with your Mac?

A. I once tried to use my Mac as a Ouija board. What do you think "QWUCTXZSO" means?

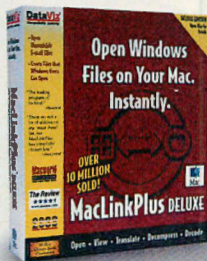
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without being limiting.





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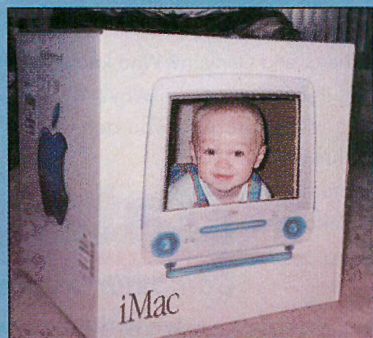
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We Know Some People Who'd Love to Have Your G4

Unlike most people, I've had the extreme privilege of purchasing a Performa 6205. I kept hearing all this noise about the G4. I thought—G4, shmee-four, what can it do that my trusty Performa can't? I mean, when I maxed the RAM to 64MB it positively screamed (just like my Pinto when I put high-octane fuel in it). But recently I bought a G4/400 with 128MB of RAM. I've had it for a couple of days and I'm thinking of going back to my Performa (hell, I'm even going to bring it back to the original 8MB of RAM). Yeah, right!!!—BOB ELLIOTT

RECENTLY SIGHTED

We bought this really great computer, and baby Kaitlyn was happy to play with the box. She loved her new toy so much that we created a special screen for her. A future Mac addict!—ELIZABETH AND ROBIN HORLOCK



HOW FAST is its processor?



MMM...GRAPE.

BIG MOUTH

I recently had some friends over for the night to show off my new iMac. Well, these geniuses decided it'd be fun to put some hot sauce in my mouth while I slept. Not bothering to check the label, they randomly picked the one labeled, "Hot sauce from hell!"

I awoke with an incredible burning in my mouth and frantically ran around the house. Just when I thought my tongue would burn off, I ran to the iMac and, lord help me, I put the mouse in my mouth (a difficult feat, I assure you)! And what do you know, suddenly the burning stopped and there was peace in the world.

—WILLIAM GRAHAM

ARE YOU TWO TALKING ABOUT THE SAME MAGAZINE?

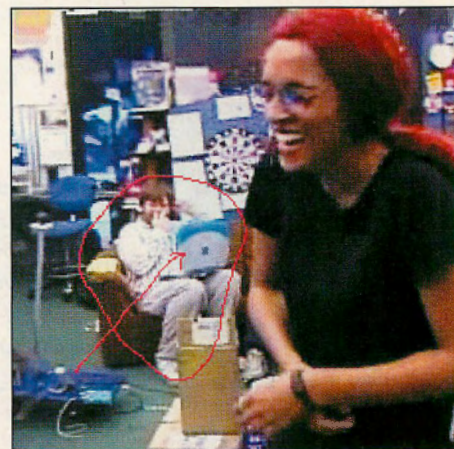
I just wanted to commend you on such a great magazine! I am a new Macintosh user (former PC guy), and I was looking for a magazine that would have articles and info I could use. I tried another Mac magazine (*Macworld*) and was very disappointed. I found most of the info irrelevant to me. I picked up your March issue, and *MacAddict* is great! All the articles

are very interesting and the CD-ROM is fantastic (unlike the *Macworld* one). This magazine has actually made me excited about being a Mac user! You can count on me as a loyal new subscriber!—PHIL CASTILLO

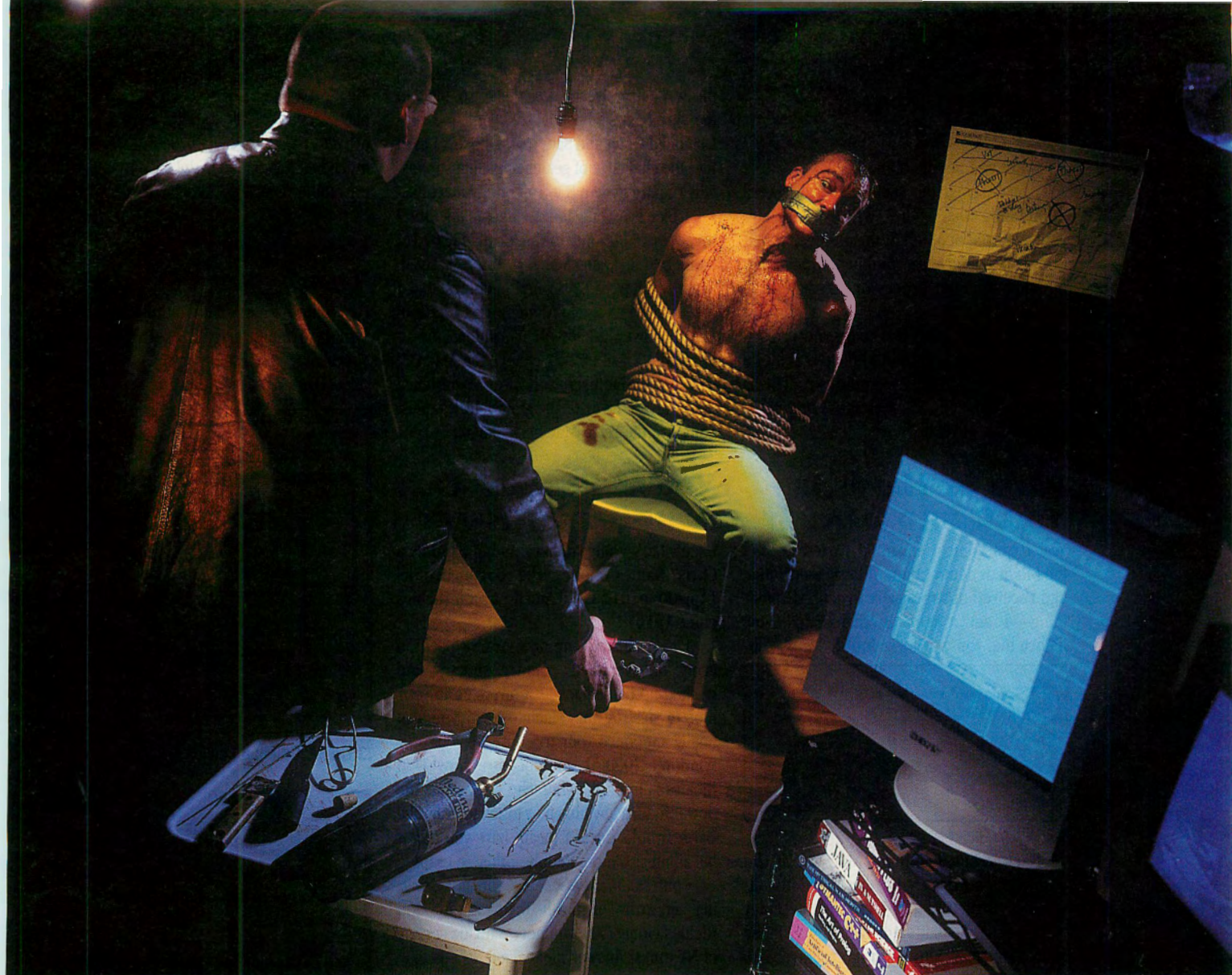
You seem to focus on wasting more and more of your "content" space on ever more inane and (to me) worthless subject matter. A substantial fraction of the magazine has always been like this—that fraction seems to grow with every issue. That's too bad, since the real content can be pretty good. As it is, *MAD* magazine seems to be where you're headed.—PAUL STIFEL

YOU'D BETTER WATCH YOUR BACK NOW

I saw in the last staff video that after Narasu kills Nikki and is stuffing her under the table, Ian is in the background laughing! Is he an accessory to murder?! And he's using the iBook that's missing from the iBorg! Watch him—he could be a traitor. I'm just bringing this horrible fact to your attention because I am a concerned *MacAddict* reader.—GABE HENKES



LET'S HOPE Narasu doesn't know Ian saw her kill Nikki.



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ARE YOU IN THE ACADEMY?

What are you people doing?!

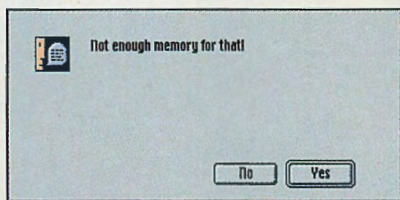
I just viewed the staff video from April 2000 and...what? Why? Who? Where are your parents, people?! Stop smoking...whatever you people are smoking! Crack, pot, curtains, Pentium processors—whatever it is, it's not healthy!

It's a good thing this magazine rules. I don't think you folks would have much of a career in the entertainment industry! This is all very sad and scary at the same time.

—JEFFERSON MONTOYA

WE'D BE HAPPY IF YOU COULD DRIVE IT

Yes! I can control anything! I tried to load the Mixman demo on my skimpy 64MB Mac and received this message. I realized something—I am a *god*! Bwahahahaha! Bow before me, you worthless fools!



WE WOULD just say no.

Heck, when I told my Mac that it *did* have enough memory for that piece of software, it worked nicely! I control the inner workings. As a matter of fact, I will make your iBorg turn into a living creature! You just wait...—TYSON TATE

LET'S SEE YOU WALK THE DOG WITH IT

The first thing I did when I got my new G3 was trash the dorky round mouse. I know many others have done the same thing, but I found a useful alternative for the little booger! Take a look at the enclosed photo of my handy-dandy invention: the iYoyo.—TIM MONK



LET US GUESS—only one string?

THEY NEVER IMPROVED ON IODINE, EITHER

I love System 7.5.5. I believe what Ice-T said—if it ain't broke, don't fix it. I love

the way it rarely crashes, the retro look of the scroll bars, the title bars, and the old-fashioned Open and Save dialog boxes. I even love the challenge of getting apps that supposedly require System 8 to run on my machine.

I feel everyone is passing me by, but I love my 51-month-old Performa 6116. Some people want their G3s and G4s (well, actually I have a G3 in my machine), but I just think of all the fond memories I have of my Mac over the years. It saddens me to think that X will forever change the Mac OS, and future Mac users will never experience many of my favorite programs and games. Long live the retro Mac user.—MATT

YOU'RE BREAKIN' OUR ACHY-BREAKY HEART

I see what's going on here. Is Ian Sammis a Chris Gaines clone, aka Garth Brooks (Apr/00, p10)?! Is Gil Amelio a Don Rickles clone (p16)?!

It's so clear to me now. You've used an army of overrated country singers and washed-up comedians as a diversion in your plot to destroy the Macintosh so you can finally announce your true love of—gasp—Windows 2000! I am not sure how Don Rickles is in on this, but who else wields the power to turn anything they touch to crap like Garth Brooks does? I mean, have you *heard* his albums? C'mon, people—they're crap!

Confess, *MacAddict*: are you not creating an army of Garth Brooks and Don Rickles clones? Are you not a sadistic society of NT thugs? Answer me!—ERIC NEGRON

UM...YEAH, THAT'S IT

Who was playing in your review of Unreal Tournament (Apr/00, p52)? A spread of minus 30? What were you doing—just standing there playing "Who can kill me fastest?"—IAN O'SHAUGHNESSY

INTUITIVE

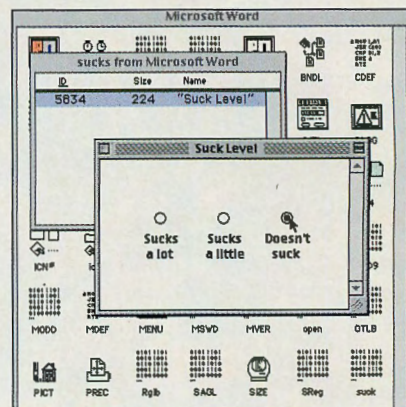
I just read your article in the April issue about Star Wars: Episode 1 Racer. While the review was good overall, it is rather misleading to say that 3dfx compatibility is nonexistent. I have been playing Pod Racer quite nicely on my beige G3/300 with a Monster Voodoo-2 PCI. Here's how: Install all 3dfx extensions, as well as standard OpenGL. In the switches.txt file, enable the no_GL_check option, which bypasses the initialization hardware check.

I also have the MesaGL package installed, but I'm not using it for Pod Racer. All in all, my system works flawlessly, except that since I haven't got a VGA adapter for the port on the Voodoo yet, I'm using two monitors—I play

the movies on the ATI monitor while the game plays on the Voodoo monitor. This is a small price to pay, and the picture looks excellent, much better than that of the 6MB Rage Pro on my motherboard.—CHRIS O'DAY

COMMAND-Q HELPS, TOO

Hey, guess what—with a little help from ResEdit, I found a really easy way to make Microsoft Word suck less. See for yourself.—DAN MOOREHOUSE



IS THERE A SIMILAR option for Windows 98?

YOU KNOW YOU'RE A MAC ADDICT WHEN...

...you base your Finder labels on the *MacAddict* review ratings.—MARK AND PAUL EGLI



NEAT!

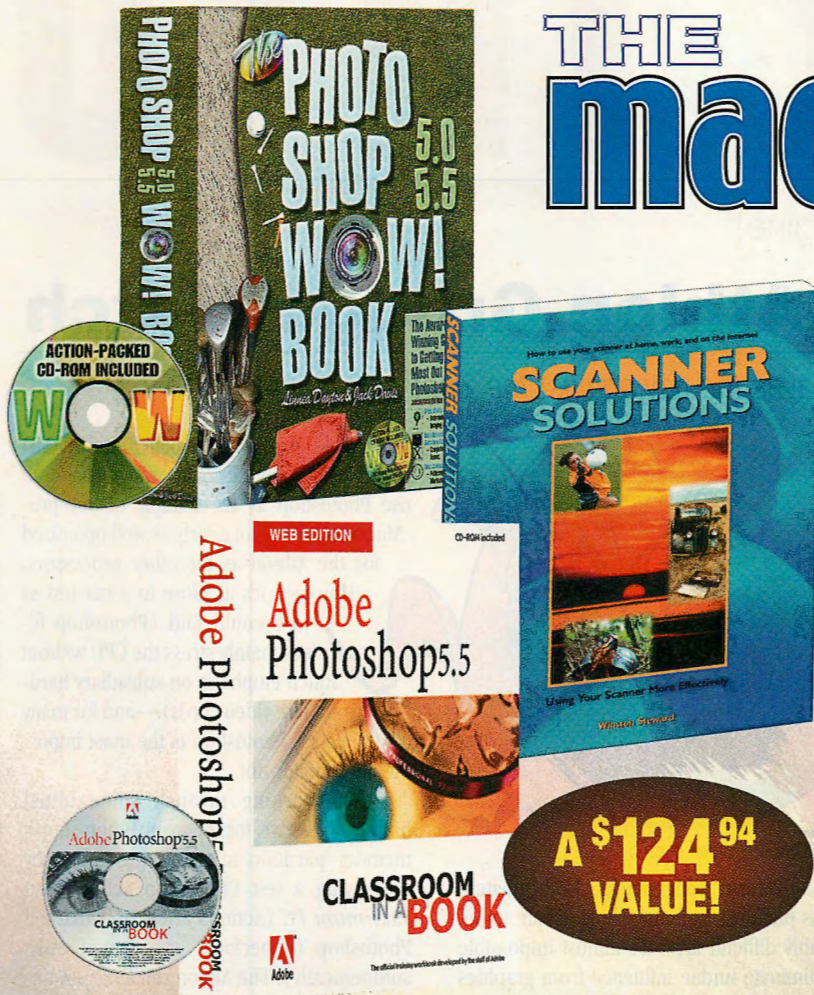
...you take a bunch of *MacAddicts* and leave them in your dentist's waiting room, preferably using them to conceal magazines such as *PC World* and *Maximum PC*.—DAN MOOREHOUSE

...you can offer your two cents' worth on list servers or newsgroups as 2¢ instead of \$.02, since you don't have to memorize some esoteric Alt code to generate a cent sign!—DALE CRITCHLEY

...your collection of *MacAddict* Discs outweighs your collection of AOL coasters.—MATT BIGARANI

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MacAddict 7/00 N931/YS354/04



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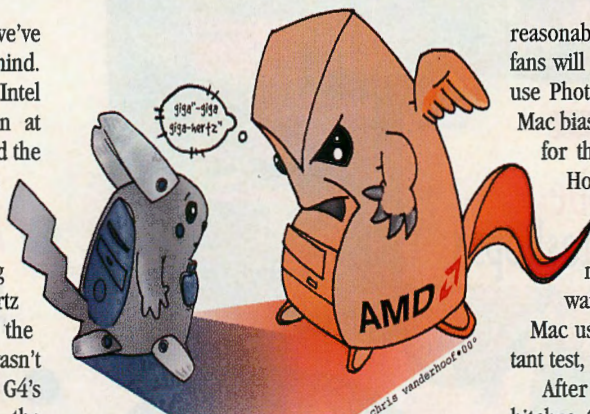
We choose you, Velocity Engine!

Graphite vs. Athlon Grudge Match

The G4's super-cool vector unit saves the day against the zippy x86 champ

These last few months, we've been feeling just a tad behind. Last March, both AMD and Intel announced chips that run at 1GHz (respectively, the Athlon/1GHz and the Pentium III/1GHz). After all the snails and the flaming bunnies in Apple's television commercials of a year ago, it'd be hard to face our PC-wielding coworkers if their thousand-megahertz wonders started forcing us over into the slow lane. Fortunately for us, Apple wasn't kidding around when they named the G4's built-in vector-based turbocharger the Velocity Engine—when running at full capacity, it pulled the G4/500 into a dead heat with the Athlon in our Photoshop tests.

To allay our fears, we borrowed a 1GHz AMD Athlon system from *Maximum PC*, our PC-lovin' sister magazine. All that remained for us to do was to develop some good



WE HOPE it evolves soon...

cross-platform benchmarks. Unfortunately, cross-platform benchmarking is an unbelievably difficult art—it's almost impossible to eliminate undue influence from graphics card speeds, compiler technology, and other extraneous factors (soy sauce inside the keyboard, for example). After some thought, we figuratively threw our hands into the air and decided upon Photoshop as a more-or-less

reasonable program to benchmark. AMD fans will undoubtedly decry our decision to use Photoshop as an example of our pro-Mac bias, as it's not nearly as well optimized for the Athlon as for other processors.

However, it's as close to a fair test as we could find (Photoshop filters mainly stress the CPU without much emphasis on subsidiary hardware like video cards)—and for many Mac users, Photoshop is the most important test, fair or not.

After working through some initial hitches (yes, we forgot to up Photoshop's memory partition at first), we started by borrowing a test Photoshop action from *Maximum PC* (Actions are scripts that tell Photoshop to perform a series of tasks automatically). The Action ran a large number of very time-consuming filters, many of which weren't rewritten to take advantage of the Velocity Engine. On this test, the Athlon edged out the G4/500 by about 23 seconds (total test times were between two

The Scores

Gentlemen, start your filters!

When we first ran our benchmarks, we didn't increase Photoshop's memory partition beyond its base level, crippling the G4's performance. (Mac OS is unique in requiring users to set memory partitions by hand; other operating systems allocate memory on demand.) Once we fixed the problem, the G4 and the Athlon ran individual filters at roughly comparable speeds.

Unfair Benchmarking 101

Gaussian Blur	G4/500:	2.3s	6.9s
	Athlon/1000:	2.0s	
Unsharp Mask	G4/500:	0.9s	6.2s
	Athlon/1000:	1.2s	
Find Edges	G4/500:	1.4s	6.0s
	Athlon/1000:	0.9s	

TIME TO COMPLETE ONE FILTER. Shorter bars are better. Translucent bars show the G4's poor performance with a tiny memory partition.

Mouse Down! Stopwatch! Actions!

The *Maximum PC* benchmark, stressing a variety of filters, gave the Athlon a narrow but measurable speed advantage over the G4. That advantage disappeared in the *MacAddict* benchmark, which used only Velocity Engine-enhanced filters.

Mouse Down! Stopwatch! Actions!

Maximum PC	G4/500:	159.8s
	Athlon/1000:	136.8s
MacAddict	G4/500:	29.7s
	Athlon/1000:	30.2s

TIME TO COMPLETE ENTIRE ACTION. Shorter bars are better.

and three minutes). While this certainly isn't good, the 17 percent difference wasn't the trouncing we'd feared.

To see how much the Velocity Engine helped when it was in full use, we constructed a second test suite comprised only of filters written to take full advantage of the Velocity Engine. In this test suite, the G4/500 performed substantially better—it ended up in a dead heat with the Athlon. The tie is a fairly impressive demonstration of how much of the G4's raw power depends on getting the Velocity Engine into gear.

Even at 1GHz, the Athlon couldn't take the G4 to the mat. Unfortunately, though, Motorola's troubles building faster G4s have cost us the bragging rights we enjoyed when the G4 first shipped (six months ago, the G4/500 was considerably faster than the then-current x86 chips). Hopefully, Motorola will be able to get some faster hardware out the door and allow us to get back to toasting bunnies.—JS

Other Benchmarks

Unsatisfied with the simple speed test, we subjected the two machines to a number of other benchmarks. Here's what we found.—JS

ScrewMark

G4/500: 0

Athlon/1000: 6

NUMBER OF SCREWS NECESSARY TO OPEN CASE. Longer bars are more irritating.

BeigeMark

G4/500: 0

Athlon/1000: 100

GENERAL BEIGENESS OF THE CASE. Longer bars are beige.

BlowMark

G4/500: 0

Athlon/1000: 2

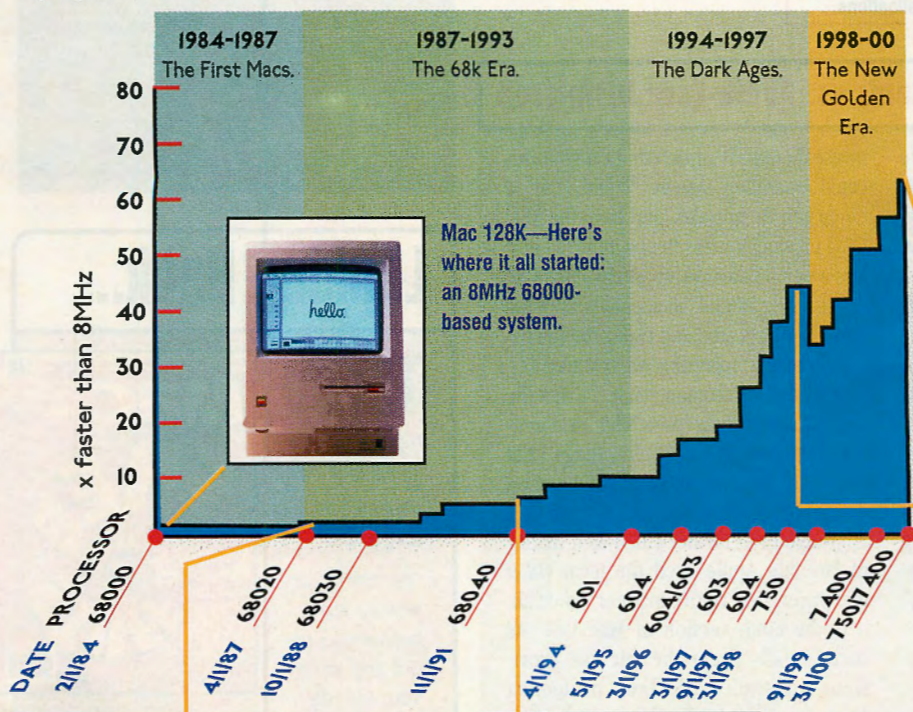
NUMBER OF CPU FANS ATTACHED TO THE PROCESSOR. Longer bars blow harder.

Speeding Things Up

62.5 times faster and counting

Watching processor speeds has been an entertaining game in the more than sixteen years since the first Macs rolled off Apple's production lines sporting ultra-fast 8MHz 68000 processors. To put things in perspective, here's a timeline of Apple's processors and speeds so

far. Keep in mind that clock speed isn't directly comparable between different chips, so this chart doesn't convey just how much faster modern Macs are than their 1984 equivalents. Clock speeds double approximately every 30 months, so judging by history we should reach 1GHz around the start of 2003.—JS

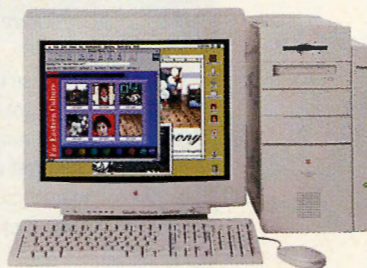


Power Macintosh

G4—Clock speed alone doesn't quite convey the power of the G4, which is largely derived from its quick Velocity Engine.



Power Macintosh 9600—Many power users still miss the six-slot design of the Power Macintosh 9600, Apple's last 604-based Machine.



Mac II—The 68020 based Mac II was the first Mac without a built-in monitor, and the first not based on the 8MHz 68000.



The 68040—Motorola's difficulties in speeding up the 68040 in 1992 to 1993 led Apple to switch to the RISC-based PowerPC chips.

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Shareware Pick of the Month

USB Overdrive

PRICE: \$20

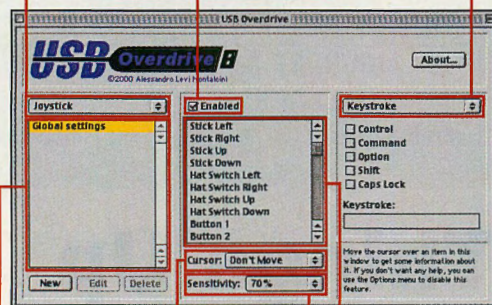
URL: <http://www.usboverdrive.com>

If you want to use the latest game gear and you have a USB-capable Mac (via either built-in USB or a PCI card), you *must* use USB Overdrive. This überdriver enables you to use just about *any* USB input device with your Mac, whether it's for Mac or PC. USB Overdrive isn't just a gamers' toy, either. Anyone who wants to use a USB input device should look into it. It handles mice, trackballs, joysticks, and gamepads, and it sometimes makes a better USB driver than the Mac drivers that shipped with the device in the first place. It's hard to find enough nice things to say about a product that let us use all five of our Intellimouse Explorer's buttons in Unreal Tournament.—DR

Device—Select the device you want to control from this pop-up menu.

Enabled—Turn USB Overdrive on or off for specific applications.

More Settings—This pop-up menu sets the function for the switch.



Cursor—Control the cursor from any USB input device as you would with a mouse.

Settings—Choose the device switch you want to customize.

Settings—Create settings for individual applications.

Sensitivity—Control how fast the cursor moves.



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<http://www.dvdchanger.com>, \$1,499

If you've dreamed of the day when you can play Unreal Tournament while shuffling through your 198-disc CD collection, occasionally stopping for a second to watch the best parts of *Goodfellas* on DVD, have we found a product for you! The ultimate in low-cost, high-fashion mass storage, the PowerFile C200 sports two CD-DVD drives along with a caddy that holds up to 200 discs. The drives can read all manner of DVD-ROM, DVD-R, CD-R, CD-RW, CD-ROM and other disc types, and all of this delicious data streams through one of three 400-Mbps FireWire ports just as fast as the two 32X CD-ROM and 6X DVD drives can pump it out. Now that's overkill!—DR

Got some cash to burn? Find the C200 (product code: D619) at Macaddict's new partner site, SeeMeBuyMe. Go to <http://www.seemebuy.me> or call 877-751-7967.



WITH TRANSLUCENT BLUE-AND-ICE plastic pinstripes, the PowerFile C200 is the most stylish way to store 200 of your favorite DVD movies.



Microware Systems vs. Apple-Case Dismissed

As we have come to expect, Apple's phenomenal (and somewhat frightening) legal department has done it again. On March 15, U.S. District Judge Robert Pratt dismissed a lawsuit that Microware Systems Corporation had brought against Apple.

Microware has been shipping an operating system named OS-9 since late 1989. When Apple announced Mac OS 9, Microware promptly sued, claiming that the name infringed on its trademark rights ("There Can Only Be One," Dec/99, p22).

Since OS-9 isn't available to consumers (Microware sells it directly to manufacturers through licensing agreements), Judge Pratt ruled that "it would be difficult to imagine a scenario where a prospective buyer of OS 9, expecting to

invest thousands of dollars in a sophisticated operating system, would, out of confusion or mistake, purchase the Mac OS 9 product for less than a hundred dollars a unit...Likewise, no prospective Mac OS 9 buyer would accidentally stumble into a sophisticated and expensive licensing agreement regarding Microware's OS-9. That defies common sense." Given the lack of any realistic possibility of confusion between the two OS 9's, Judge Pratt refused to grant Microware an injunction or the damages it sought.

Judge Pratt further ruled as a matter of law that Apple used the term OS 9 in a purely descriptive manner (after all, it is the ninth version of Mac OS). As such, it falls under the fair use provisions of trademark law, protecting Apple from any further legal action. The ruling effectively ends Microware's lawsuit. Microware intends to appeal the ruling.—JS

Looking Back...

Three years ago:

"Performas are history. Now, before you go out and tell all your friends

that Apple is abandoning the home market, listen closely. Performa sales tanked at Christmas. The name Performa just did not connote power."—Kathy Tafel



The Greatest Photos

We finally sorted through the Great Photo Contest Entries!

Back in our December 1999 issue, we conducted the Great Photo contest: Take pictures in one of three categories and make them look their best with Software Architects' Great Photo application, and you

might win one of several cool prizes courtesy of that company. We've finally come up with some winners from a batch of truly inspired photos—you folks really outdid yourselves this time!—*DR*

The Winners

1st Place

Best Overall

Winner of a Nikon CoolPix 950 and a copy of Great Photo
Brian J. Cagle



WE JUST COULDN'T RESIST the tasteful colorization of this frog photo. The tendency is to go overboard with these kinds of modifications, but Brian managed to rein in those instincts.

1st Place

Best Millennium Celebration

Winner of a DVD-RAM drive, a copy of Great Photo, and a copy of DVD-RAM Tune-up
David Ivancic

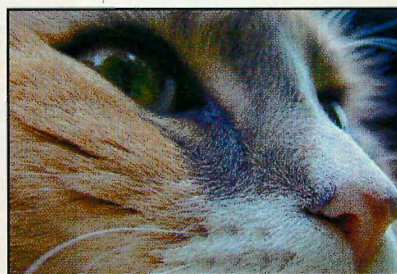
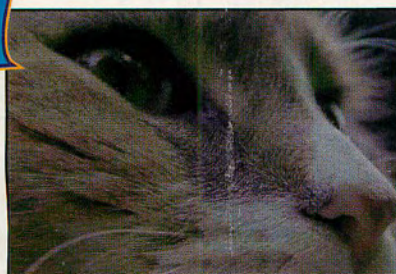


A FAR CRY from the havoc the authorities told us might happen at the flip of the calendar, David's interpretation of the Montreal millennium celebration is a thing of beauty.

1st Place

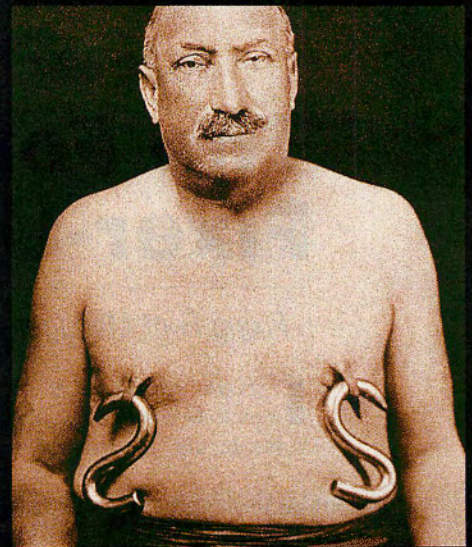
Best Pet

Winner of a DVD-RAM drive, a copy of Great Photo, and a copy of Software Architect's DVD-RAM Tune-up
Jack Wolf



THIS KIND OF CLOSE-UP photography can go so wrong, but Jack captured an incredible amount of detail around this cool cat's eyes.

THERE ARE MANY THINGS
MORE PAINFUL THAN

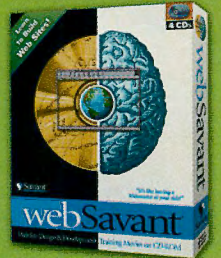


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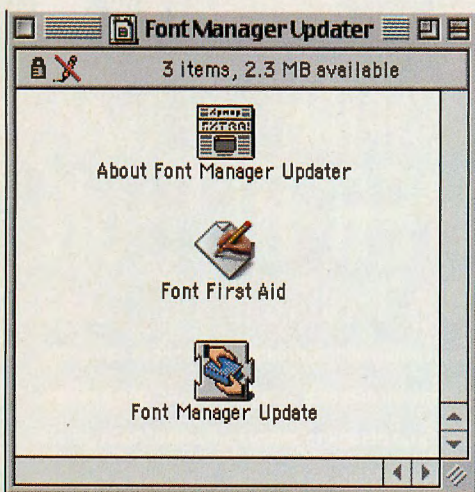
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The Font Fixer-Upper

Fixing Font Manager problems in 8.6

If you're using Mac OS 8.6, you should be aware that the Font Manager may create corrupt resources inside some applications or fonts. If this occurs, you may have problems printing and displaying fonts in your applications. PageMaker and QuarkXPress are a pair of apps that suffer seriously from this bug. Fortunately, Apple is aware of the problem and has released a fix called the Font Manager Update, consisting of an extension that prevents the problem from occurring, as well as a utility to fix damage already done. Apple recommends that all Mac OS 8.6 users install this update or upgrade to Mac OS 9, which has fixed that particular bug. You can download the Font Manager Update from Apple's Web site at <http://til.info.apple.com>.—BZ

THE FONT MANAGER UPDATE IS A must-have for Mac OS 8.6 users



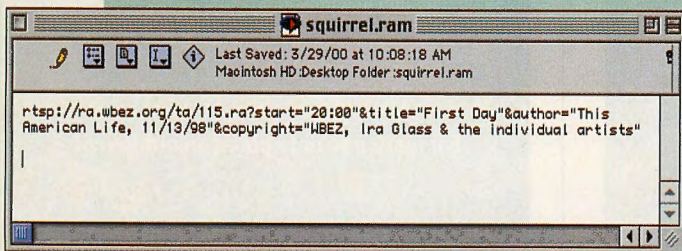
Skiping Downstream

Get to the good part with RealPlayer

Here's a cool way to skip to an exact part of a RealPlayer stream. First, click the link in your Web browser to play the stream as you normally would—this will download the usual .ram file. Open this file in BBEdit, or a similar text editor, and you'll see something like

this: an rtsp (Real Time Streaming Protocol) URL, followed by a question mark, and then a series of parameters separated by ampersands (&). Just add a "start" parameter (of the form start="mm:ss"), and you'll have a new RAM file that'll take you exactly where you want to go.—JS

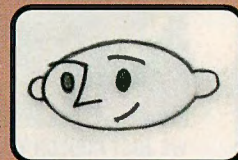
WITH THE START PARAMETER added, opening this .ram file in RealPlayer will automatically start 20 minutes in.



Draw Max! Win FreeHand 9!

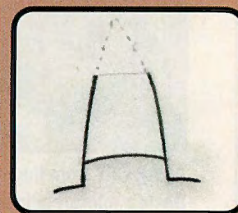
Max is fast and easy—at least drawing him is. A pencil, pen, eraser and nine quick steps will get you a run-of-the-mill, ho-hum Max (as if there were such a thing). Think you can do better? Take your best shot at drawing an inspired incarnation of our beloved mascot, and send it to MacAddict, c/o Ian Sammis, 150 North Hill Drive, Brisbane, CA 94005. We'll pick the best Max drawings, print them in our October 2000 issue, and send the best Max artist a copy of Macromedia's FreeHand 9. Remember to draw your image on a plain white piece of paper. And keep it in good taste, people.—NR

His Head



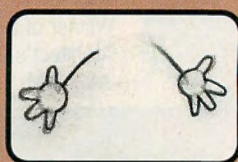
1. Draw a wide, short oval for Max's head. It should be large enough to contain his eyes, nose, and mouth.
2. Draw two long ovals for Max's eyes.
3. Draw two small ovals on the sides of Max's head. These are his ears. Erase the portion of the ear inside the oval you drew for the head. The outline of the head should remain on the other side, since that ear would be partially hidden by the head if you were looking at Max in three dimensions. Remove the outline of the head from the right ear.
4. Draw an elongated, slightly slanted Z to create Max's eyebrows and nose.
5. Draw a slightly curved arc for Max's mouth.

His Body



6. Max's body resembles a boxy letter A with a wide serif at the bottom. Draw one with a top that touches the bottom of Max's head. The serifs at the bottom of the A will form his feet, while the cross-stroke will define Max's torso.

His Arms



7. Draw two circles for Max's hands. Draw three carrot-shaped ovals that intersect his hand to create the fingers and thumb. Erase the intersecting portion within the hand.
8. Connect the hands to the top of Max's body with simple lines. These are his arms.

Finalize Your Drawing.

9. Go over your pencil outline of Max with a black pen. Make sure your lines are all the same thickness. Now that you're done, marvel at your talent!



Drive home a classic.



Hard Disk ToolKit® 4.0 is one upgrade with a lot of moxie. Don't pass it by!

This new version of FWB's all-time classic disk utility includes full support for **MacOS 9** and all the latest machines from Apple, including the new iMacDV and iBook. So don't enjoy that new **G4** smell without Hard Disk ToolKit under the hood. Version 4.0 incorporates cutting-edge technology with the utmost reliability and rock-solid stability you are used to receiving from FWB.

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scrapbook

Our ever-hungry hardware kludge assimilates new technologies for your enjoyment.

iBorg Mark II

by David Reynolds

All right, we confess—we've been working on the iBorg (our robotic mobile Web cam) for a couple of months now, and while it's been slow going, we've made significant improvements to everyone's favorite iBook-toting remote rover. Here's a look at the iBorg's humble beginnings and how it looks today. Ian Sammis gets credit for this newest incarnation of our little monster.

New Eyestalk

Faced with poor image quality and drivers a couple of years out of date, we replaced the iBorg's Logitech (<http://www.logitech.com>) QuickCam with the Ariston Technologies (<http://www.ariston.com>) iSee-Pro camera—after a brief flirtation with the iRez (<http://www.irez.com>) Kritter. The iSee-Pro has a mount that swivels up and down, which may make a tilt-control feature possible in the future. Although the ice-clear camera doesn't look anywhere near as menacing as the original QuickCam, it provides far better video—and it works with Sorensen Broadcaster (<http://www.s-vision.com>), the power behind the iBorg's broadcast abilities.

A Fresh, New Paint Job

For the iBook, that is: We replaced the iBorg's original blueberry iBook with a tangerine model due to the unauthorized acquisition of the original iBook by unknown parties. The new iBook has the same basic configuration as the original, but sports a bright new color that may force us to repaint the iBorg itself.



I am iBorg,
hear me roar.

THIS IS THE ORIGINAL
iBorg before modifications
rendered it operable.

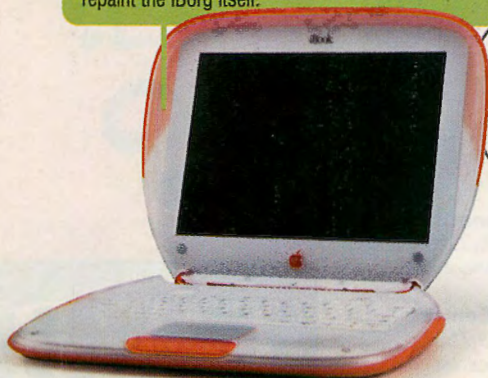
PHOTOGRAPHS BY AARON LAUER

ADB? No, USB!

We replaced the aging ADB I/O with a brand-spankin'-new DT9804 data acquisition module from Data Translation (<http://www.datatranslation.com>). This high-performance box uses the iBook's USB port to provide access to its 16 analog and 16 digital channels for motor control. The monster module leaves open the future possibility of contact sensors, a temperature sensor, and all kinds of other iBorg enhancements.

Spaghetti No More

We replaced the messy and confusing wiring harness the original iBorg sported with two project circuit boards and four relays—one of which is nonfunctional, a sort of vestigial organ. A project casing partially houses the boards; we have plans to create a full enclosure at some point.



Check out the Kritter (product code: 0615), iSee-Pro (product code: 0616), and DT9804 (product code: 0617) at <http://www.seemebuy.com> or call 877-751-7467.

Job Opportunities

Web Programmers • Washington, DC • HTML, Perl, CGI, SQL, ASP, PHP, JavaScript, Apache and Coldfusion. Can you program any or all of these in your sleep? Then wake up and get your "back-end" moving! If you have at least 3 years of experience and are highly proficient in programming, send us your resume today to take advantage of some exciting opportunities.

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Web Designers • Washington, DC • We are in search of designers who can make web sites come alive! If you know Photoshop, Dreamweaver, Flash and have a strong sense of what is aesthetically pleasing as well as functional, send us your online portfolio today.

Copywriters • Chicago • An international agency with an extensive client list seeks experienced copywriters to work directly with senior copywriter and creative director. The ideal candidate possesses 3-5 years of agency experience plus knowledge of current trends and consumer behavior.

Multimedia Software Engineers • Chicago • An innovative client is seeking Multimedia Software Engineers. Proficiency in Macromedia Director, Lingo, Dreamweaver or Authorware is required. You will be working in a team environment that offers career growth and an excellent compensation package.

Mac/PC Gurus • Providence • RI company is looking for Mac/PC gurus with extensive knowledge of networking, operating systems, and cross-platform connectivity. The ideal candidate will be familiar with hardware and software for upgrades and troubleshooting.

Typesetter • Providence • A Rhode Island printing company is looking for a computer-based typesetter. Expertise in PageMaker is required. Experience with Quark, Photoshop, Illustrator, Freehand, the ability to convert files from PC to Mac, rip, and perform color separations is also needed.

Associate Creative Director • Dallas • Do you have strong conceptual skills and the drive to develop award-caliber websites and online advertising? Our client is looking for someone with a solid background in web-based technologies, development and marketing who can also present creative ideas and finished work to clients with élan.

Web Writer • Boston • The Web Writer is responsible for feature, program and promotional content throughout the client's site. He/she will also manage other web editorial projects, serving as both writer and creative project manager. Familiarity with HTML and associated authoring software and tools as well as 5+ years in business communications is required.

Art Directors • Philadelphia • Center City marketing agency has an ongoing need for Art Directors. Positions require excellent knowledge of Illustrator, Photoshop and QuarkXPress plus 3-5 years design or art direction experience in an agency environment.

Site Author • New York • Work on the internet's best and most attractive auction site! You must be an expert in HTML and at least one of the following: JavaScript, DHTML/CSS, Flash, streaming media, JSP, QuickTime VR, multiple-platform support. Real-world web development experience on at least one commercial site is desired. The successful candidate likes working on a team, doing intense and rewarding work, and being around cool, creative and intelligent people. Experience with graphics software or server-side development is helpful.

Senior Art Director • St. Louis • Senior-level Art Director with experience in high-level design sought to work closely with the client from initial concept to a multi-tiered corporate marketing initiative. Supervisory experience is helpful but not essential.

Flash Designers • St. Louis • We have a variety of openings for Web/New Media experts. Proficiency in coding HTML and JavaScript is crucial; knowledge of CGI and ASP is helpful.

Mac Tech Support • New York • Growing publishing company is looking for a Mac Tech with a minimum of 2 years of experience. Candidates must have strong knowledge of Quark, Photoshop, and Illustrator. Knowledge of NT, HTML, UNIX, and FileMaker Pro is a plus.

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Graphic Designer • San Francisco • Part-time and permanent positions in and around San Francisco are available for experts in Photoshop, Quark and Illustrator. Any experience with the production of 2D graphics for interactive and video applications is a plus. These skills are in high demand and offer very competitive pay.

Print Designer • Baltimore • A small suburban ad agency seeks a Print Designer who displays grace under pressure to handle everything from proofing to design to pre-press production. You must be a QuarkXPress expert, exhibit acute attention to detail and have the ability to work independently.

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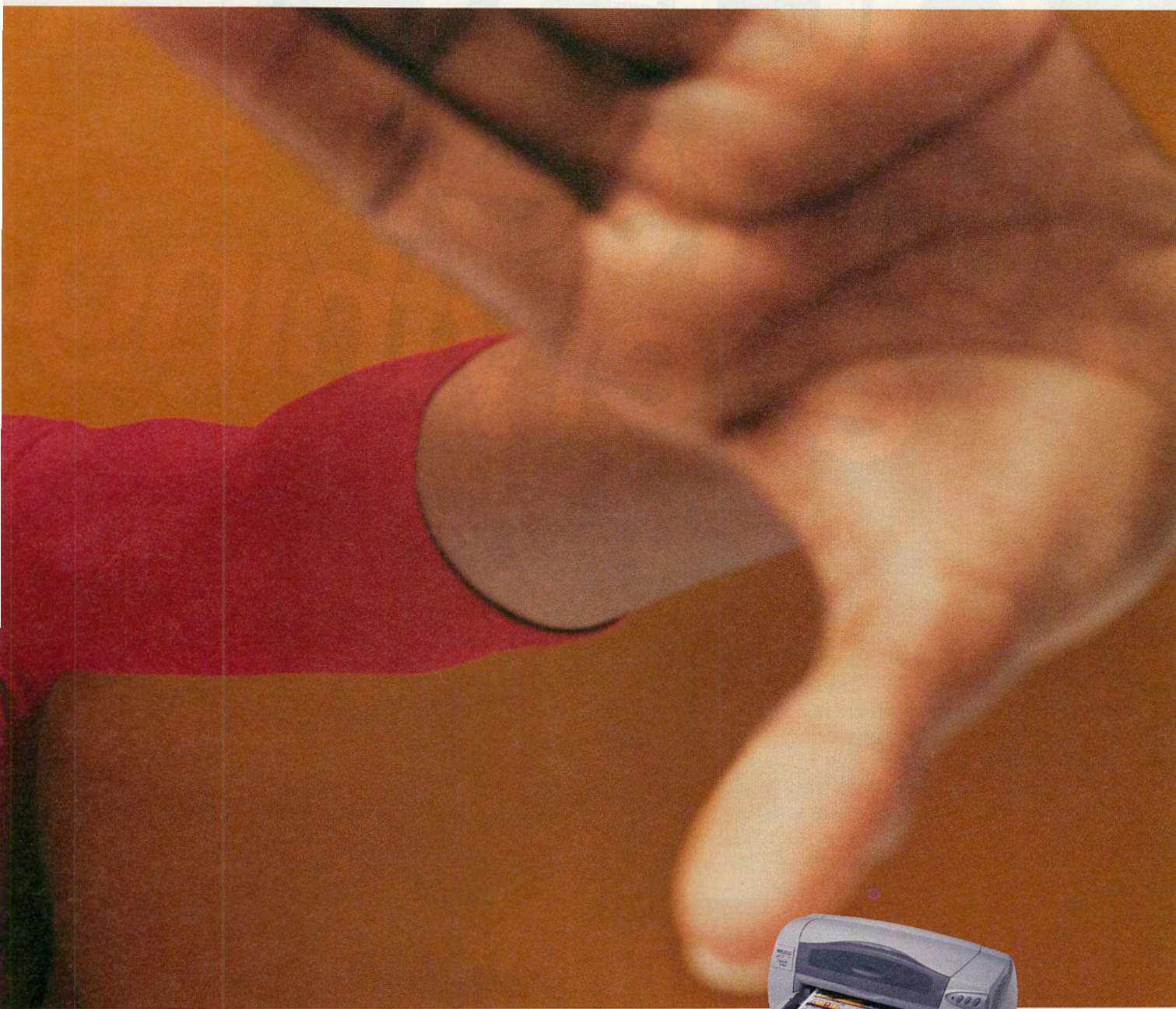
<http://www.hireknowledge.com>



Go Wide.

Introducing the new HP DeskJet 1220C printer designed for the Mac.

If your work demands a wider range of capabilities, the Mac-compatible HP DeskJet 1220C delivers the big picture — up to 13" x 19" including 11" x 17" full bleed — *right out of the box*. It features HP's enhanced Color Layering Technology for true-to-the-original printouts and an alternative 2400 x 1200-dpi mode using photo paper. With speeds up



Go Wild!

Big, brilliant color printouts up to 13" x 19".

to 11 ppm for black and 9.5 ppm for text and graphics, you can go as wild as you want and still print faster than you ever thought possible. Look for the HP DeskJet 1220C/PS PostScript printer, available with Adobe® PressReady™ Basics for \$599. Stop by your HP retailer today. Discover how wide great printing can be. **True to the Original.**

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how to

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35 PAGES
OF TIPS,
TRICKS, AND
HOW-TOS
THAT WILL
BETTER YOUR
MAC—AND
YOUR LIFE.

If

you've ever wondered how to make your Mac start faster, how to meet someone online, or how to play your favorite game at work without tipping off the boss, wonder no more. In this feature, we'll tell you how to do it all. From utterly fun, time-wasting projects such as making a choose-your-own-adventure movie and becoming a better first-person shooter, to utterly useful tasks like setting up a second monitor and sharpening an image, we show you how to become the most knowledgeable, hippest, most impressive Mac-do-it-yourselfer on the block. We even tell you once and for all what all of those damn startup commands are and what they do. So from this day forward, think of yourself as the Bob Villa of the Mac world. If that doesn't make you the toast of the neighborhood, we don't know what will.

how-to
system
hardware
games
graphics
internet
productivity
multimedia

page
29
36
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52
58
62

Illustrations by XPLANE

speed up

start up

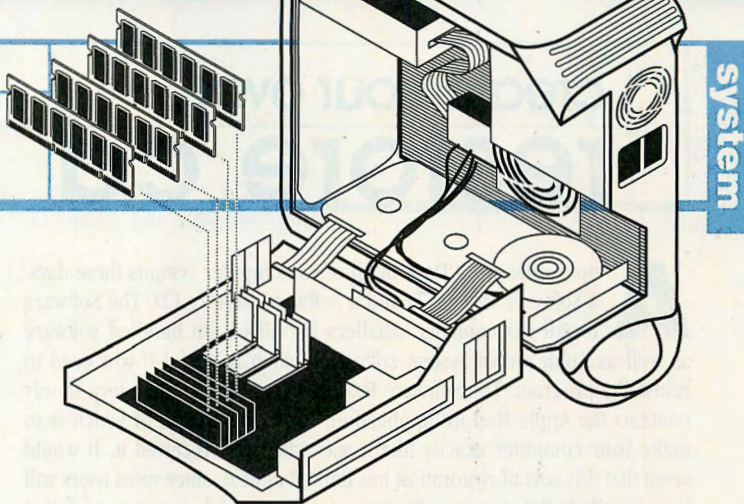
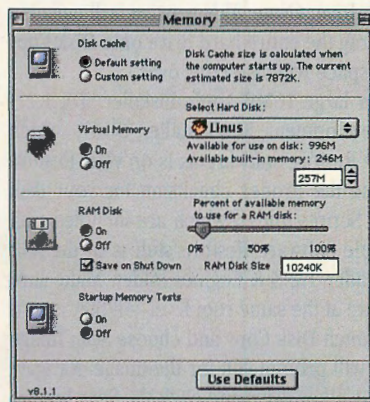
Starting up your Macintosh can take a long time (or at least feel as if it takes a long time) while it looks for a startup volume, checks RAM, loads Extensions, and launches the Finder. If you want a reality check, start up your Mac with Extensions off and be amazed at how fast the Finder pops up. There are a few things you can do to speed up your Mac's startup process, though—at least by a few seconds.

- Turn off memory-checking by holding down the Command and Option keys as you open the Memory Control Panel. You'll see a new section at the bottom that says Startup Memory Tests. Click the Off button and close the control panel. Your Mac will now skip the preliminary RAM tests that it normally performs at startup, potentially saving you a lot of time. If you start to experience weird crashes, turn it back on and restart to have your Mac check your RAM.

The Startup Memory Test feature won't prevent crashes, but it will let you know if something's wrong.

- Trim down the number of Extensions you use. Besides

ALTHOUGH IT'S HIDDEN away and only accessible with an arcane key combination, turning off the Startup Memory Tests control can make your Mac boot more quickly.



speeding your Mac's startup, you'll also make it a bit more stable—and that's good for everyone involved.

- Invest in a copy of Casady & Greene's Speed Startup (\$19.95, <http://www.casadyg.com>), which can trim quite a bit of time off of startup by making your Mac's hard drive more efficient.

- If you're looking for a shareware alternative, try Marc Moini's Startup Doubler (\$20, <http://www.marcmoini.com>). This widget accelerates hard disk operations (through a caching mechanism) when loading Extensions and other startup items. You can use Startup Doubler with Speed Startup for the best potential results.—DAVID REYNOLDS



HAVE SOME SYSTEM IDEAS of your own? Visit our forum at <http://www.macaddict.com/debate>.



FIND SPEED STARTUP 1.0.2, Startup Doubler 2.5.3, Smart Scroll 3.6b6, Memory Mapper 1.3.1, and Kaleidoscope 2.2.2 on The Disc.

navigate the finder

without a mouse

Mouseless maneuvering in the Finder is incredibly easy, and it'll save you a lot of time. It'll also seriously impress the non-Mac folks out there, many of whom seem convinced that the Mac is involved in an evil plot to make them use their mice for things that a keyboard could do just as well.

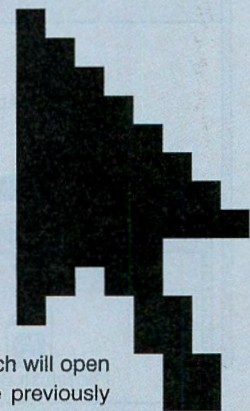
Step 1. To select a file in the active window (or on the desktop if no window is active), just start typing its name. The Finder will select the file within the active window with the name closest to what you've typed. If you type the wrong character, just wait a few seconds, then start again. If you get near the file you want, you can use the arrow keys to jump to the right files, whether you're in a list view or icon view. You can also press Tab to go to the next file in alphabetical order, or Shift-Tab to go to the previous one.

Step 2. To open a folder, launch an app, or open a file, press

Command-O or Command-Down Arrow.

Step 3. If you go into a folder that you didn't intend to access, press Command-Up Arrow to go to the parent folder. (If the folder you're in sits on the desktop, Command-Up Arrow will go directly to the desktop.)

Step 4. If you want to close the window you're in, press Option-Command-Up Arrow (which will go to the parent folder while closing the active window) or Option-Command-Down Arrow (which will open the folder you've selected while closing the previously active window).—IAN SAMMIS



create your own
restore cd

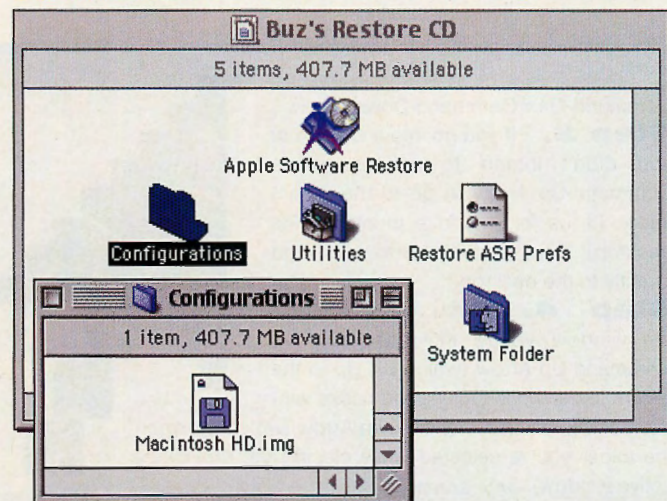
Apple ships two CDs with all of its computer systems these days: a Software Install CD and a Software Restore CD. The Software Install CD contains installers for all of the bundled software as well as Apple's own System software, which is useful if you need to reinstall a program. The Software Restore CD is a bit of a mystery. It only contains the Apple Restore application, the sole function of which is to make your computer exactly like it was when you received it. It would seem that this sort of restoration has limited appeal, since most users will have installed all their own software and customized their system such that restoring it to factory settings would be a major step backwards. Wouldn't it be nice if you had a Restore CD that restored your system to *your* settings and software? Well, now you can.

In order to do this, you'll need a CD burner, Disk Copy (from your System Software CD), Apple Installer SDK 1.2.3, and your original Apple Restore CD. A separate disk partition or external hard drive of at least 740MB is useful, but not necessary if you have enough space on your hard drive. Then follow these steps.

Step 1. Understand the Apple Software Restore software. The Apple Software Restore application works by reading from a disk image file that resides in the Configurations folder. When the program launches, it reads from the disk image file and copies its contents to the hard drive. There can be more than one disk image in the folder, and Apple Software Restore will let you choose. Be aware that this disk image must have a certain checksum value to work.

Step 2. Get your system set up just right. Remember, you do not need any documents since this is not a backup. Install all of your special software, configure your Internet connection, set your preferences, etc.—basically, clean up your drive. Also try to keep it small—a CD is only 640MB, and even though Disk Copy can compress data fairly well (about 2 to 1), try to keep the total data size to under 1 gig.

YOUR NEW RESTORE CD will be just like the Apple Restore CD except that information about your specific hard drive will be in the Configurations folder.

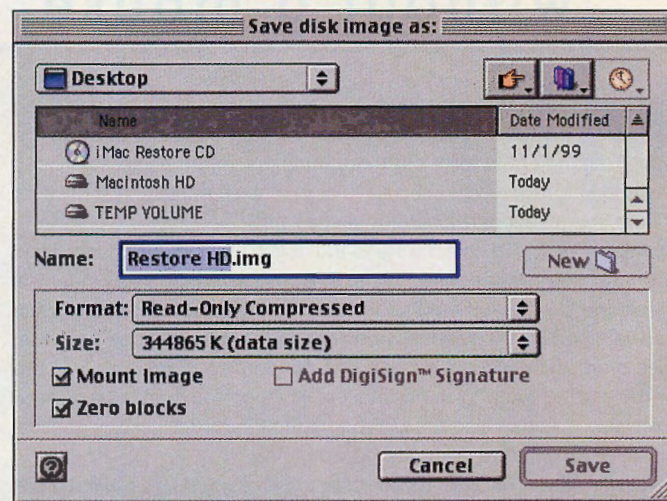


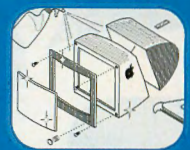
Step 3. Boot to your system CD by pressing C at startup. Create a folder on your drive and name it (the same name you want to call your restored drive). We named ours Macintosh HD. Drag all of your other drive items into this folder. Next, locate Disk Copy on your System CD in the Utilities folder. Drag the Macintosh HD folder onto the Disk Copy icon. This will create a disk image of your clean hard drive. Save the image as Read-Only Compressed format to your hard drive or to a second hard drive or drive partition. (You can also create the disk image on your hard drive and then drag it to a second hard drive when it's done. Saving it to a second hard drive or partition is not necessary, but it helps keep your files separated.) Once you save it, drag all of the items from the Macintosh HD folder back to the root of your hard drive. Trash the empty Macintosh HD folder and reboot to the hard drive. (Note: This process will ensure a smaller amount of data—if you drag the entire hard drive onto Disk Copy to make a disk image, the empty space will also copy over.)

Step 4. Download the rather large 16MB Apple Installer SDK 1.2.3 ([ftp://ftp.apple.com/developer/Development_Kits/Installer_SDK](http://ftp.apple.com/developer/Development_Kits/Installer_SDK)), which contains the same Apple Software Restore software as is on your Restore CD, as well as the tools to create the proper checksum for your disk image. Locate Disk Copy and the Scripts folder, which are included with the Installer SDK. (All of the Apple Software Restore stuff is in the ASR 1.3.2 folder, which is in the Upgrader 1.2.3 & Engines folder. Make sure the scripts folder and Disk Copy are at the same root level—if they aren't, put them in a folder together.) Launch Disk Copy and choose Scan Image For ASR from the Script menu. It will prompt you for the image. Navigate to the disk image you saved to your other drive and click the Scan button. You now have a disk image that will work with Apple Software Restore.

Step 5. Make your CD. On the same drive that contains the disk image you made, create a folder with exactly the same name as you will name your CD. Copy into it all of the contents except for the

CREATING a disk image of your hard drive will take some time—you may want to walk the dog while you're waiting.



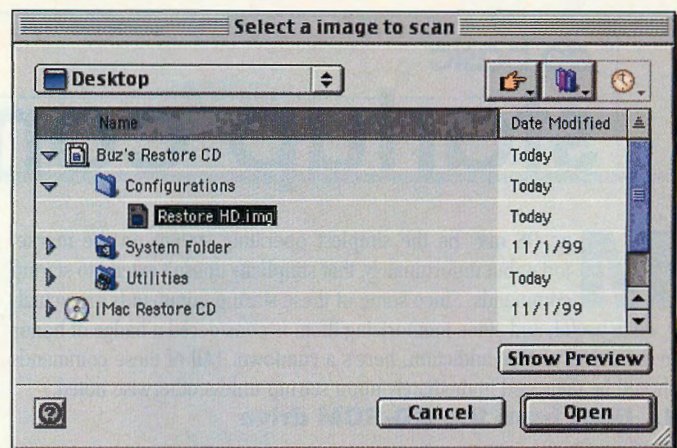


YOU'LL FIND DISK COPY and the Scripts folder when you open the Installer SDK. Make sure they're in the same folder.

Configurations folder from your Apple-supplied Restore CD. Now create a new Configurations folder in that folder, and place your disk image in it. Using Disk Copy, make a disk image of the whole folder and save it to your normal drive. Mount the newly created image on your desktop by double clicking it. Using your CD-burning software, such as Toast (<http://www.adaptec.com>), drag the mounted disk image into the Toast window and create a bootable Mac Volume. Once the CD is done, you will have a bootable, custom restore CD!

Special note to System Administrators: Creating the CD can be a real time saver if you have to do installations on lots of similarly configured machines. The trick is to first partition the drive on one new machine, then configure it using one of the partitions.

Another trick makes Apple Software Restore act like the PC program Ghost. You can drag any drive image that has been converted to the



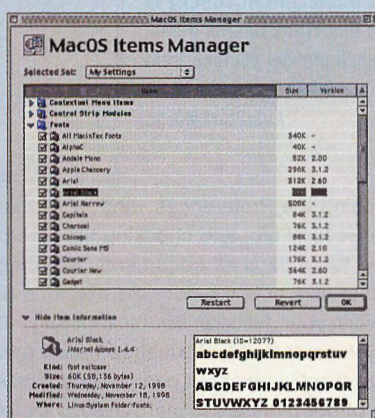
THIS IS THE IMAGE you'll want to scan using Disk Copy.

proper checksum onto the Apple Software Restore icon and it will restore. So, you can have a bootable, networkable CD with Apple Software Restore on it and have a bunch of drive images on the network. Just boot to the CD, log on to your network, drag one of the images onto the Apple Software Restore icon, and restore over the network!—BUZ ZOLLER

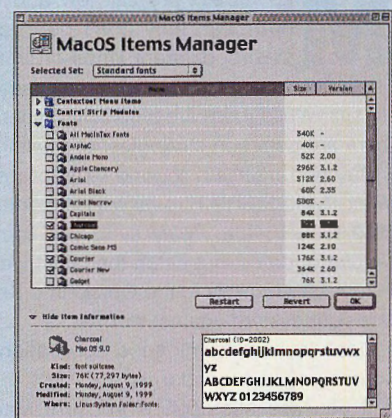
manage fonts

Too many fonts can spoil your Mac experience—by delivering a big, fat crash. Even if you don't hit the 128-font suitcase limit (512 in Mac OS 9), wading through 90 fonts in a menu is time-consuming, and extra fonts eat up RAM, slowing down certain operations. That's why font management is so important. There are several font management packages available that do roughly the same thing: They keep the number and organization of fonts under control—a couple even load the fonts as they're needed. But in the interest of saving some cash, here's how you can use the \$5 shareware utility, Mac OS Items Manager (<http://members.aol.com/vjalby/MacOSIM>), to manage your fonts. (It can also handle Control Strip items and Contextual Menu items.)—DAVID REYNOLDS

Step 2: Open the Mac OS Items Manager Control Panel and register the program (you *did* pay the \$5 fee, didn't you?). You'll see a window (which looks suspiciously like the Extensions Manager window) with three folders: Contextual Menu Items, Control Strip Modules, and Fonts. Click the reveal triangle next to the Fonts folder.



Step 3: Select New Set from the File menu and name your new font set whatever you like—we chose Standard fonts, but you should really be more creative than that. Select only the fonts that you want to use in that set, and click OK (or Restart, if you're ready to use the fonts right away)—you'll have to restart before you can use the new set. Create multiple sets for various applications and situations.



Step 1: Install Mac OS Items Manager. Just drop the Mac OS Items Manager Control Panel on your System Folder and restart your Mac.

do basic

startup commands

Mac OS may be the simplest operating system on the market today, but unfortunately, that simplicity doesn't extend to startup commands. Since some of these startup commands are actually quite useful, and since memorizing them is considered a badge of honor in the world of Mac addiction, here's a rundown. (All of these commands should be delivered immediately upon startup unless otherwise noted.)

1. Boot from the CD-ROM drive

Hold down: C

This command lets you boot from a CD-ROM and is useful for debugging your computer and installing programs from CD.

2. Turn off extensions

Hold down: Shift

Thanks to extensions that don't feel like playing together, a Mac can crash horribly on startup. This lets you start the ever-tedious game of removing recently installed extensions in search of the problem child.

3. Rebuild the Desktop file

Hold down: Command-Option

Rebuilding the desktop is the Mac equivalent of an oil change, and doing it on a regular basis can help prevent crashes.

4. Close Finder windows

Hold down: Option (after the system begins to load)

For all of us slobes, catching a glimpse of the desktop through all our open Finder windows is about as likely as catching a glimpse of Elvis in a Midwestern cornfield. Holding down Option on startup will immediately close all open Finder windows. Just make sure to wait until the "Welcome to Mac OS" window appears.

5. Zap the PRAM

Hold down: Command-Option-P-R

Sometimes, when things go horribly wrong, it helps to clear bad data out of the parameter RAM (a tiny amount of memory that is maintained by the motherboard battery even when the machine is off).

6. Pick a Startup Disk

Hold down: Option

Very recent machines (FireWire PowerBook, iBook, AGP-based G4, and slot-loading iBook only) include a cool bit of software called the Startup Manager, which lets you select from among every drive with a valid System Folder.

7. Bypass the Startup Disk

Hold down: Command-Shift-Option-Delete

The Pick a Startup Disk trick supercedes this command on newer Macs, but on most Macs it's still useful—it lets you bypass your normal startup device in case, for instance, you have a backup system on a separate hard drive that you want to boot from.

8. Go to Open Firmware

Hold down: Command-Option-O-F

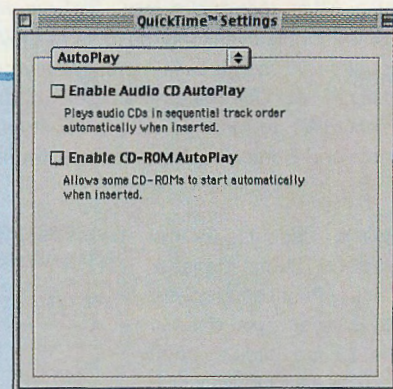
Don't mess with this unless you're a true geek—it lets you tinker with the Open Firmware boot loader that sets up the hardware before Mac OS begins to boot. This command lets you determine whether your system boots through Mac OS or another operating system, or debug hardware problems. To resume normal booting, type "bye" at the command prompt. This command will simply lock up many older Macs because they default to communication through a serial port instead of the keyboard and mouse.—IAN SAMMIS

protect your mac from viruses

Mac viruses are still few and far between, but that does not mean they don't pop up every so often. There are several different kinds of critters to worry about: viruses (including the macro and email varieties), worms, and Trojan horses. While there are significant differences between these bugs, there are common strategies for dealing with them.

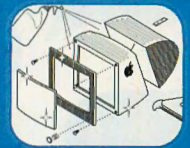
- Buy and maintain a good virus program. We recommend either Virex (\$49.95 SRP, <http://www.dr Solomon.com>) or Norton Antivirus (\$69.95 SRP, <http://www.symantec.com>). Both programs provide regular updates that catch the latest viruses.
- Turn off AutoPlay in the QuickTime Settings Control Panel to protect your system against worms.
- Don't launch downloaded applications unless they come from a source you know and trust.
- If you use Microsoft Word, turn Macro Virus Protection on by

BY DISABLING AUTOPLAY in the QuickTime Control Panel, you'll prevent yourself from being the victim of an AutoStart worm.



opening the Preferences window (under the Tools menu), clicking the General tab, and checking the Macro Virus Protection box. That way, Word flags all documents with macros embedded and allows you to take action before the macro is run.

- Visit your favorite troubleshooting site to stay on top of virus developments. MacFixIt (<http://www.macfixit.com>) and About.com (<http://antivirus.about.com/internet/antivirus/mbody.htm>) are a couple of good places to start.—DAVID REYNOLDS



clean out your system folder

Odds are, your System Folder has more than 1,000 items and occupies hundreds of megabytes of space. The killer thing is that only a portion of that space is taken up by stuff you need—you can throw the rest away. Telling the difference between what you can and cannot trash is the tricky part—throw away the wrong item, and you can disable your Mac. Here's a safe way to clean out your System Folder.

- Go through the Preferences folder. View it as a list, sort it by size, and throw away any preference to an application that's no longer installed.
- Do the same for the Control Panels and Extensions folders, but before you throw anything away, use the Extensions Manager to turn off suspect panels and Extensions—that way you'll see if they really are necessary. Then, move them to a folder outside of your System Folder for a short time to see if you run into a problem.
- Go through the disabled Control Panels and Extensions folders to look for items that you may have turned off and forgotten about.
- Examine your Help and ColorSync folders for applications you don't have installed or hardware that you don't own, and throw them away.
- Turn on the Calculate Folder Sizes option (in Options under the

Other System Folder Files

These items are found loose in your System Folder. You probably shouldn't move them out of the System Folder, unless you determine from the descriptions below that you don't need an item and want to trash it.

• **32-bit System Enabler:** under System 7.1, this document added the option of 32-bit addressing to the Memory control panel. This option allows Macs to use more than 8 MB of RAM. It was mainly intended for the Macintosh II, IIfx, and SE/30. Under later systems, this option was built into the Memory control panel, giving you the option of turning 32-bit addressing on or off. On some newer Macs, this option is no longer available, and the computer always runs with 32-bit addressing ON.

EVERYTHING YOU WANTED to know about your System Folder but were afraid to throw away is contained right here.

View menu) to prioritize your work. A 4K file isn't as important as a 10MB one.

- **Note:** The authoritative source for understanding everything in your System Folder is Dan Frakes's shareware tome InformINIT (\$15, <http://mc04.equinox.net/informinit>), which has information on everything that you're likely to find in your System Folder and will help you decide whether or not you want to keep it. Problem solved.—**DAVID REYNOLDS**

change the appearance of your desktop

Your choices here range from simple modifications in the Appearance Control Panel to shareware programs that completely rework the look and feel of your machine. Here are three ways to freshen up your tired desktop.

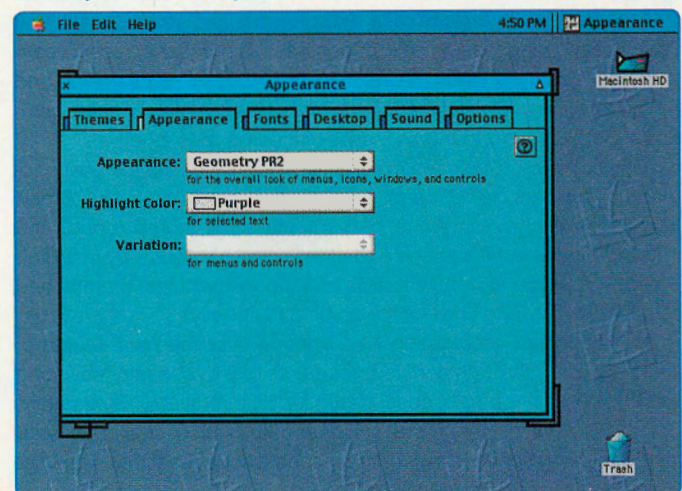
Method 1. The Appearance dialog box lets you do a fair amount of playing around. If you just want to brighten up your desktop's appearance without going over the top, go to the Appearance Control Panel, select the Desktop tab, and pick a new desktop image or pattern. If you want to spice things up a bit more, drag a folder full of images onto the desktop image in the Appearance Control Panel—your Mac will select a new picture from the folder each time you restart.

Method 2. If you are running Mac OS 8.5 or later, you can radically change the look of your windows, menus, icons, and other user interface elements by making changes in the Appearance tab inside the Appearance Control Panel. You unfortunately will need to find alternative themes first, since Apple gave up on this feature halfway through development. Luckily, there's the Appearance Archive (<http://vision.simplenet.com>), where you can find different themes as well as the Theme Machine—so if you want to try your hand at a beta-level theme generator, this is your chance.

Method 3. The well-regarded shareware app Kaleidoscope (<http://www.kaleidoscope.net>) gives you much of the same functionality as Method 2, but with a much, much broader selection. There are many hundreds of

Kaleidoscope themes in existence, so if you're really looking for a change, this may well be it.—**IAN SAMMIS**

USING THEMES, you can completely change the appearance of your Mac. Don't say we didn't warn you.



prepare your system for

OS X

It's difficult not to sound like a member of some doomsday cult: Mac OS X is near, and we should all begin to prepare for its arrival.

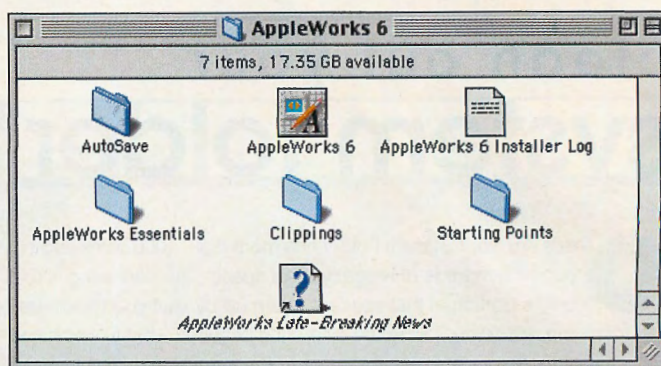
When it comes, it will fix some of the most longstanding irritations about our favorite operating system. No longer will we have to listen to the howls of laughter from our PC-using friends as we shamefacedly quit applications to give them more memory. We'll never again have to mutter bitter curses as we reboot our systems to clear up the debris left by a crashing app.

However, we're also facing an entirely new operating system. We're looking at a strange, hybrid byproduct of Mac OS and OpenStep that has great potential, yet warrants some precautions. Here's how to get yourself ready for OS X.

Step 1. Set aside a drive or partition of at least 2GB to serve as your startup disk when you install OS X. Resist using the space for movies, files, or full installations of games unless you can delete them with a clean conscience.

Step 2. Start being Carbon-aware. Buy Carbon-compliant versions of your favorite applications as they begin to appear. While you won't notice a difference between these apps and their non-Carbon equivalents under Mac OS 9, you will see a difference when you go to OS X because they'll run without the tedious and cycle-consuming need to run OS 9 in a compatibility environment. If your favorite vendor hasn't committed to producing a Carbon version, start emailing and request one.

Step 3. Start tinkering with a Unix variant (preferably a BSD



CARBON APPS HAVE ALREADY STARTED to arrive—Apple's new AppleWorks 6 should run native under OS X.

clone, although Linux will do in a pinch) or with Mac OS X Server. While the user interface will be totally different from that of Mac OS X, the command-line options will be the same—and will provide you with a wealth of power-user tricks that you'll be able to use under OS X with little modification. If you're really feeling brave, install Darwin (<http://www.publicsource.apple.com>) on the partition you're reserving. Darwin—OS X with the user interface removed—is available for free from Apple.

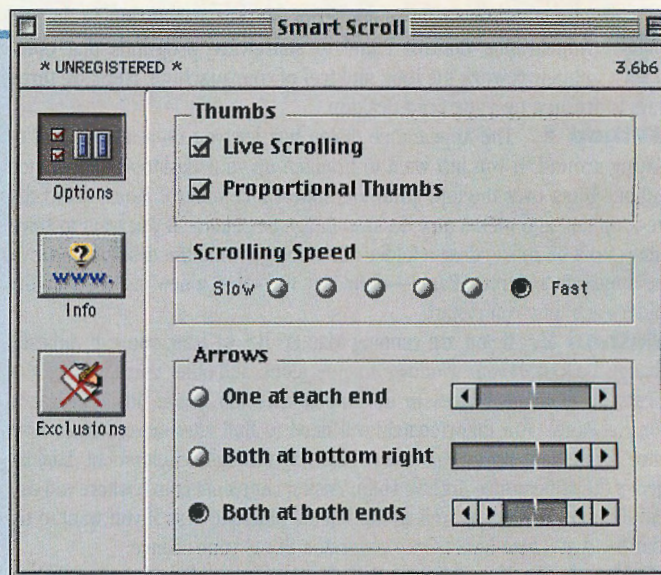
Step 4. Find another machine to run your third-party peripherals. Since Mac OS X requires entirely new device drivers, it's likely that for a time you won't find support for certain peripheral devices under OS X. If you've got an older Mac sitting around, dust off the mothballs because you may need to use it to drive peripherals that you use occasionally. If you use a large number of third-party peripherals on a regular basis, you'll probably want to wait for drivers to release before you make the switch to OS X.—IAN SAMMIS

customize your scrolling bars

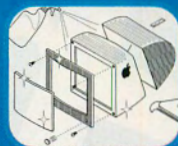
Scroll bars are such a mundane and ubiquitous part of the Mac experience that we take them for granted—that is, until they become unusable. Two things have happened in recent years to make ordinary scrolling more difficult: hideously fast scrolling and Smart Scrolling. Conveniently, you can use the same shareware, Smart Scroll (\$12, <http://www.marcmoini.com>), to fix both.

One of the most heinous things that Apple's done in the past couple of years is to change the default scroll bars to Smart Scrolling—which gives you a proportional scroll thumb (good) and puts both scroll arrows at one end of the scroll bar (bad). By installing Smart Scroll, you can have it all, including proportional thumbs and scroll arrows at both ends of the scroll bar. Groovy!

With the huge increase in Mac speeds over the past couple of years, scrolling through certain documents has turned into a blinding experience as the pages go whizzing by uncontrollably. Fortunately, Smart Scroll also includes a scroll throttle, which can bring your Mac's scrolling speed down to a reasonable level. Take that, you user interface butchers!—DAVID REYNOLDS



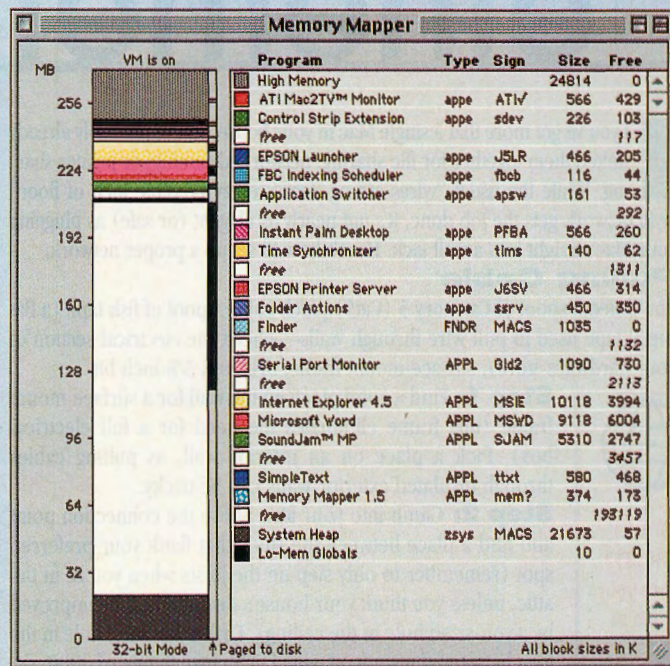
THE SOLUTION TO MOST of your scrolling woes lies in the Smart Scroll shareware control panel.



manage memory

Rleased back in 1984, the original Mac OS was meant to work with only one application open at a time—whether that was the Finder, PageMaker, or Excel. Then, along came the MultiFinder, and RAM was divided up among multiple applications so that every time you launched an application, the amount of available memory was fragmented. For Power Mac users, Virtual Memory ameliorates this situation somewhat by mapping portions of the memory to the hard drive and therefore making applications take up less RAM; however, the situation won't truly be resolved until Mac OS X releases later this year, with its much more modern way of doling out memory to applications as they need it. In the meantime, here are some tips to get around Out Of Memory errors.

- Buy more RAM. Okay, so this costs money, but a RAM purchase will give your applications more room to move, making Out Of Memory errors less common.
- Make sure that your applications are using the amount of RAM you've assigned to them. You can do this by using a free shareware utility called Memory Mapper (<http://www.macfixit.com/library/tul/MemMapper.sit.hqx>), which will show you how RAM is allotted on your Mac, including how much free space each process is using. Running this application can be quite revealing.
- Unless you have a good reason not to, leave Virtual Memory (in the Memory Control Panel) on. PowerPC-based Macs make great use of Virtual Memory, and it doesn't noticeably slow the system down.
- Leave the Disk Cache (in the Memory Control Panel) set to default. Although it takes up more RAM (and we used to recom-



MEMORY MAPPER will give you the lowdown on how much RAM your apps are gobbling up.

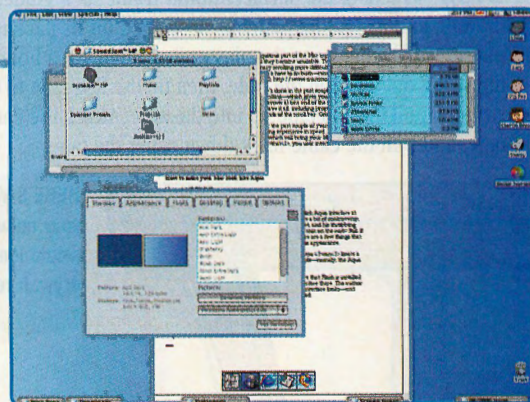
mend turning it down or even off), these days the Disk Cache speeds up your system significantly, and it only uses a few megs of RAM at most. —**DAVID REYNOLDS**

make you mac look like aqua

When Steve Jobs demonstrated Mac OS X with its ultra-slick Aqua interface at January's Macworld Expo in San Francisco, he raised quite a bit of controversy, what with its translucent menu bars, its fancy genie effect, and its throbbing buttons. (Hey! Get your mind out of the gutter and your chin on the curb!) Still, if you're the sort who can't wait for Mac OS X to arrive, here are a few things that you can do right now to make your Mac look like Aqua.

- If you have a significant amount of time and patience, you can locate a few pieces of software that have been blackballed by Apple—namely, the Aqua Theme file, to be used with Mac OS 8 or later (<http://vision.simplenet.com>), and the Aqua-esque SoundJam (<http://www.soundjam.com>) skin. If you can't access the Aqua Theme file by the time you read this, it may be because Apple has clamped down on the site distributing it. There are also Aqua Kaleidoscope schemes floating around (<http://www.kaleidoscope.net>).
- Make your application switcher window (Mac OS 8.5 or later) into a dock by tearing off the menu bar, putting it in the lower part of the screen, and

ALTHOUGH IT IS VERBOTEN by certain corporate types, the Aqua 2.0 theme file can sure make your Mac look like OS X with a minimum of fuss.



using one of the ubiquitous application switcher utilities like the free Switcher PowerUp (<http://skyscraper.fortunecity.com/binary/951/swpu.html>) to remove the border and titles.

- Go to <http://www.starkis.com.au/macossx>. Make sure that Flash is installed in your browser—and check out the demo Mac OS X interface there. The author has made a few tweaks as suggestions to Apple, but the interface looks and works very similarly to the one that Apple demonstrated. —**DAVID REYNOLDS**

wire your house properly with ethernet

If you've got more than a single Mac in your house, you've probably already linked them together for file sharing, networked gaming, or printer sharing. While the usual "wires strung across every possible inch of floor" style network gets the job done, it's not nearly as elegant (or safe) as plugging your Mac straight into a wall jack. Here's how to set up a proper network:

Pulling Cable

You'll need: spool of Category 5 (Cat5) patch cable, spool of fish tape (a flat metal tape used to pull wire through walls—check the electrical section of your hardware store), surface-mount frame, drill and 3/8-inch bit.

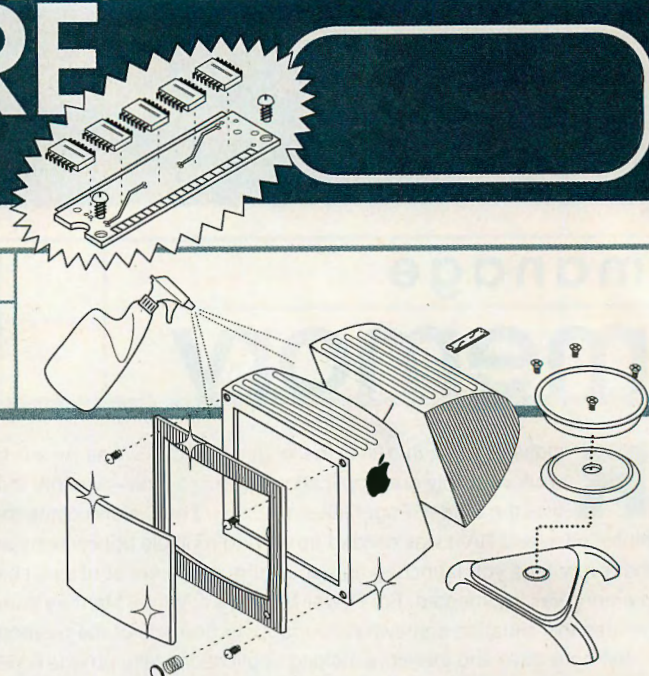
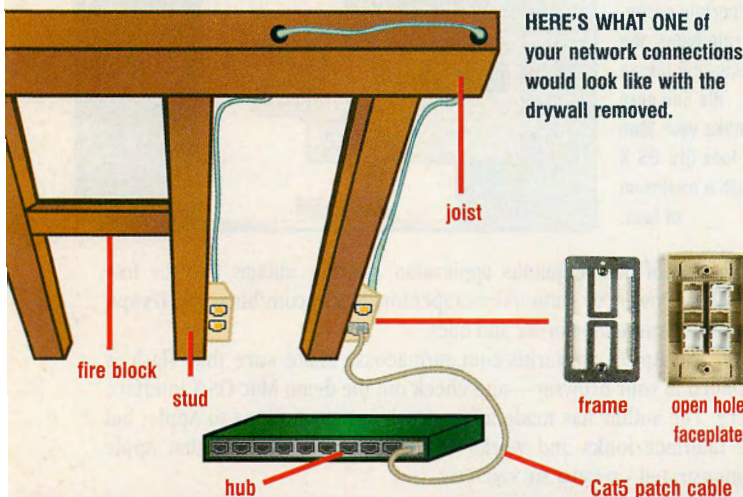
Step 1: Find a good place on the wall for a surface-mount frame (this frame eliminates the need for a full electrical box). Pick a place on an interior wall, as pulling cables through insulated exterior walls can be tricky.

Step 2: Climb into your attic above the connection point and find a place between the studs that flank your preferred spot (remember to only step on the joists when you're in the attic, unless you think your house's decor would be improved by a you-sized hole in the ceiling). Drill a 3/8-inch hole in the joist between the studs, staying fairly close to one of the studs. (If you're a newcomer to projects like this, see the diagram below for definitions of studs, joists, and so on).

Step 3: Drop a string tied to something heavy such as a nail to keep the string from catching on protrusions inside the wall. Have a friend down in room below listen for the sound of the nail striking the floor (or the junction box, if you're converting an existing box). If the line hits something halfway down, you've hit a fire block (a cross-beam partway up the wall)—shift over to the next pair of studs and try again.

Step 4: Using the surface mount frame as a guide, cut a hole in the drywall, and install the panel as described on its packaging (if you've got plaster walls, chip away the plaster first, then cut a hole in the lathe). Pull the string out through the hole, then tie the fish tape to the string. Use the string to pull the fish tape up into the attic. Attach the Cat5 cable to the fish tape, and pull the cable back down using the tape.

HERE'S WHAT ONE of your network connections would look like with the drywall removed.



The Junction Box and Faceplate

You'll need: RJ-45 keystone insert, open hole faceplate, punch tool with 110-style blade (if required by the insert).

Strip back about 0.5-inch of the outer cover of the Cat5 cable. Inside, you'll find eight colored wires. Of these, only four are actually used for Ethernet—the green wire, striped white and green wire, orange wire, and striped white and orange wire. Connect these to the appropriate pins of the insert (see chart). If you're feeling ambitious, hook up the other four wires (blue, white-blue, brown, and white-brown) as well—that way you'll be all set for gigabit Ethernet.

Once you're done, clip the insert into a hole in the open hole faceplate. Screw the faceplate into the frame, and you're all set!

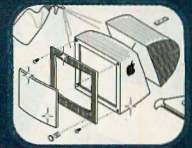
WITH A PUNCH-TYPE INSERT, use the punch tool to push each of the eight wires contained in the Cat5 cable into the appropriate place in the insert. The wedge on the outside of the blade should cut the wire at the outer rim of the insert.



The Wiring Closet

You'll need: fast Ethernet hub, 4-hole faceplate, punch tool with 110-style blade, four RJ-45 keystone inserts, four Cat5 patch cables (with plugs)

The intimidating "wiring closet" name comes from the world of corporate LANs, where the closet usually links dozens of Ethernet cables to a hub and often contains hundreds of wires that make up a typical company phone system. At home, the wiring closet usually isn't anything more than a set of three or four wall jacks located at the other end of individual computer wires. Install a surface mount frame as you did near each of your computers, but this time use a 4-port faceplate (if you need a real 16- or 32-port patch panel, you shouldn't be getting your networking instructions from MacAddict!) Leaving yourself enough slack to work, cut the cable that goes to your computer and pull the other end down to your wiring closet. Put your hub (a 100Base-TX hub for Fast Ethernet networks, or a 10Base-T hub if you don't have any recent machines) near the jacks and connect each jack to a port on the hub with Cat5 cable. You've now created a proper home network that differs only in size from the usual corporate LAN.—IAN SAMMIS

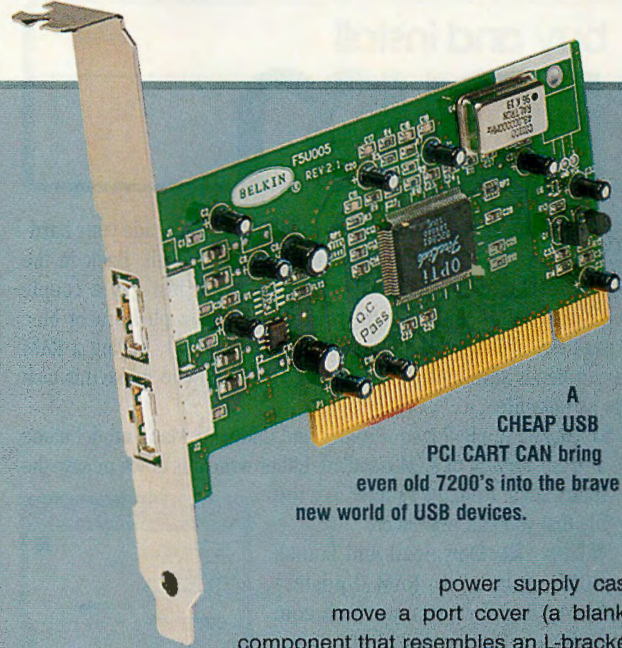


add USB to older macs

Starting off with the bad news: If your machine is old enough that it hasn't got any PCI slots (or PCMCIA slots, if you have a notebook), it's just not going to happen. If you absolutely need USB, but only have NuBus or PDS slots, you'll have to pony up \$999 for a new iMac. If you do have PCI or PCMCIA, though, adding USB slots is a relatively straightforward process.

Before you start, upgrade to the latest operating system version. Apple's USB support has improved dramatically with every OS release—you'll want the best support you can get. The recent Mac OS releases have included drivers for generic cards, so you shouldn't need to look for cards with Mac-specific drivers. If something goes wrong, however, it's often useful to deal with a company that has at least a vague idea of how the Macintosh works. While generic cards are cheaper, you may find yourself reconsidering your economy after a two-hour call to tech support that ends with "We don't really know anything about Macs."

Once you buy a card, look for the wafer-thin manual that shipped with your machine (if you're like us, you've probably wedged it under a wobbly table). Unless you're installing a card, Apple's manuals have been a bit on the useless side for the past few years. Install your card, carefully following the instructions in the manual. If it's a PCI card, you'll probably just open your case, ground yourself (either wear an anti-static wrist strap or touch your machine's



**A
CHEAP USB
PCI CART CAN bring
even old 7200's into the brave
new world of USB devices.**

power supply case), remove a port cover (a blank metal component that resembles an L-bracket), and insert the card by pressing it firmly into the slot. If you've got a card for a PowerBook, it's ludicrously easy—just push the card in (make sure it's right-side-up and the port faces up).

Once the card's installed, its USB ports should work without any further fiddling. Be aware, though, that pre-USB Macs lack the ROM code which allows OS to recognize the built-in keyboard for startup code sequences and function key programming—you'll probably want to stick with an ADB keyboard for most purposes.—IAN SAMMIS

add firewire ports to an old mac

FireWire is the hottest...er, coolest...uh, best port to make it to the Mac in a very long time—too bad it's only in the newest of the new hardware. But fear not, those of you who own a non-FireWire Mac, you can add the wire of fire to your existing system—and it's easier than you might think.

Step 1: Buy a FireWire PCI card (if you have a PCI-based desktop Mac) or a FireWire PC card (if you have a CardBus-based PowerBook). Here are a few companies that sell these beasts:

- Adaptec (<http://www.adaptec.com>)
- Digital Origin (<http://www.digitalorigin.com>)
- Newer Technology (<http://www.newerotech.com>)
- Orange Micro (<http://www.orangemicro.com>)
- ProMax (<http://www.promax.com>)
- Ratoc (<http://www.rexpccard.co.jp>)
- Swann (<http://www.swann.com.au>)
- VST (<http://www.vstech.com>)

As always, shop around for the best prices.

Step 2: Install the PCI card by installing the card's drivers, opening up



**THIS SIMPLE PCI CARD can bring the latest and
greatest connectivity technology to your Mac.**

your Mac, and then seating the PCI card firmly in an available PCI slot. You'll have to pull the metal shielding off the outside of the case and then firmly seat the card in the slot with the FireWire connectors facing out of the Mac's case. Be sure to keep yourself properly grounded (as in "Add USB to Older Macs," above) when performing this operation. If you're installing a FireWire PC card, the process is even easier—just seat the card in your PowerBook's open PC card-slot.

Step 3: Reassemble your Mac, restart it, and enjoy your newfound speed!—DAVID REYNOLDS

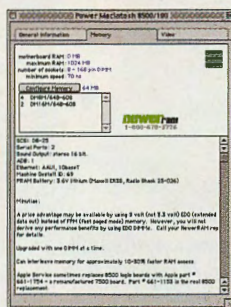
buy and install

ram

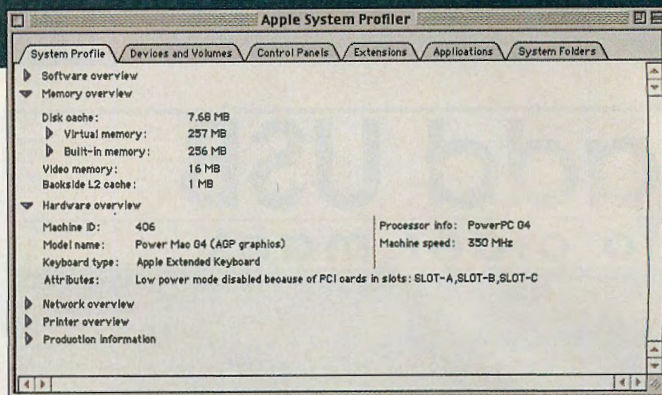
One of the cheapest and most useful ways to upgrade your hardware is to put more RAM into your Macintosh. Back in the Mac Plus days, this was easy—you could just buy a couple of 1MB 32-pin SIMMs and plug them in. Now, with a plethora of Mac models out there (each with their own memory quirks), buying a RAM upgrade can be an adventure in confusion. Here's how to make this task as simple as possible.

Step 1: Launch Apple System Profiler and find your Mac's model name and the amount of RAM installed. Either write this down or save the information from the Profiler as a text file that you can read later.

Step 2: Download and launch GURU (Guide to RAM Updates) from <http://www.newer-tech.com/software/guru/index.html>. Select your Mac's model from the floating window, and information about that model will appear in GURU's main window. There is a ton of useful information in this utility. Although GURU is provided by Newer Technology, the information is remarkably unbiased.



GURU HOLDS THE ANSWERS to all your RAM questions.



THE APPLE SYSTEM PROFILER will provide you with your model ID and show you the amount of RAM already installed.

Step 3: Click the Memory tab and read the information provided about the RAM your Mac requires. Write the information down or print it out. Then, visit the RAMWatch page at the Mac Resource Page (<http://www.macresource.com>) to get a quick list of the best RAM prices around for your Mac—the site constantly samples RAM prices from several different vendors. Shop around—RAM prices fluctuate dramatically, so checking several different sources may reveal a price break. Now that you know what you need, go buy the RAM! When you get it, take a moment to marvel at the cost per weight of memory modules—PowerBook modules can equal the cost of gold.

Step 4: Open your Mac, make sure that you are properly grounded (as described in "Add USB to Older Macs," this issue, p37) and firmly seat the RAM into an empty memory slot. (We showed you how to open almost any Mac in the January, 1999 issue—you can also visit <http://www.macaddict.com> for tips.) If your Mac has only a couple of RAM slots, you may have to remove an existing RAM card to install the newer, larger card. You can always try selling the smaller one on eBay.

—DAVID REYNOLDS



FIND MORE COMPLETE descriptions of the kinds of RAM available at <http://www.macaddict.com>.

set-up a

second monitor

One example of the Mac's superiority shines through when it comes to having multiple monitors connected to a single Mac. Just think of it—twice the desktop real estate for the cost of a second monitor and second video card. Of course, you'll have to have a Mac with an expansion slot capable of hosting a second video card (the most common kinds are those with PCI or NuBus slots). Here's how to go about setting things up.

Step 1: Beg, borrow, or buy a second monitor and video card. The video card should be Mac-compatible; the monitor can be almost any standard color monitor.

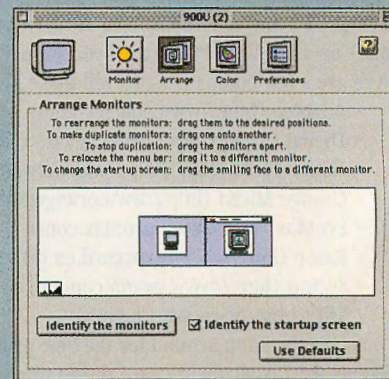
Step 2: Open your Mac and install the video card into an available expansion slot. You'll have to pull the metal shielding off the outside of the case (it looks like a metal L-bracket) and then firmly seat the card in the slot, with the video connectors facing out of the Mac's case.

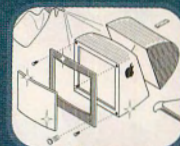
Step 3: Reassemble your Mac, connect the second monitor to the new video card, and start up. Make sure that your new monitor is plugged in and turned on. Your new monitor may (or, if the Mac needs drivers even to recognize the card, may not—this is very rare) start working right away. Install any video drivers that go with your video card at this point—you may have to restart again.

Step 4: Arrange your monitors by opening the Monitors control panel (also known as Monitors & Sound in some versions of Mac OS). Click the Arrange button and move the monitors to where you want them to connect—typically on the left or right edges. It's helpful, although not necessary, to make sure that both monitors are set to the same resolution. Close the control panel, and you're done.

—DAVID REYNOLDS

IN THE MONITORS CONTROL PANEL, you can set which monitor is the startup monitor and which has the menu bar by dragging their respective icons to the monitor in question.





reset your motherboard

Although it doesn't come up often, resetting your Mac's motherboard may be necessary at some point in your Mac career. Resetting the motherboard is like a super-powered PRAM zap—it gets rid of all of the data stored in the Parameter RAM (PRAM). It should be done under two circumstances: one, when installing a CPU upgrade; and two, if your other troubleshooting tricks have failed to revive an ailing Mac. Here's the procedure in a nutshell.

Step 1: Open up your Mac and locate the CUDA reset button on the motherboard. This varies from Mac to Mac—just look for a small button (about the size of a pencil eraser), sometimes with the word CUDA or *reset* silk-screened on the circuit board next to it.

Step 2: Press and hold the CUDA reset button for a good, long time; about 10 to 20 seconds.

THIS LITTLE SWITCH can be the key to curing big ills.

Step 3: Close your Mac and start it up.

Be sure to take all necessary precautions when poking around an open computer—don't drop metal items inside and keep yourself properly grounded (as in "Add USB to Older Macs," this issue, p37). Alternatively, you can reset a motherboard by pulling out the PRAM battery (see "Replace Your PRAM Battery," below) and just letting the machine sit for a little while.

—DAVID REYNOLDS

replace your

PRAM battery

The cause of odd quirks and outright crashes, a failing PRAM battery can be a real bear to troubleshoot. Generally, PRAM batteries (which maintain the small bit of RAM holding your Mac's settings) last about three to six years. If you notice that your Mac can't seem to remember what day it is, randomly changes printers on you, or fails to start up at all, you may have a bad PRAM battery. Here's how to change it.

Step 1: Open up your Mac and locate the PRAM battery on the motherboard. It usually looks like a short, squat AA battery. Remove the plastic cage over the battery, and pull the battery out of its cradle.

Step 2: Take the battery down to your local Radio Shack or other electronics supply house and ask for a replacement. Alternatively, if you

SOME MAC MODELS used very different looking batteries, like this one from a 6400.

really want to make sure you have the right battery, take it to your local Mac service center and ask for a replacement. You may want to compare prices between the two.

Step 3: Seat the new battery in the cradle on your motherboard. Make sure you have the battery's positive end facing the proper direction (the correct direction is marked on the plastic cradle). Place the plastic cage over the battery and reassemble your Mac. You should be good to go.—DAVID REYNOLDS

clean your mac

It's a horrifying moment for most of us. You open the case for the first time, hoping to install some useful little widget into your Mac, and a pile of dust worthy of a sixteenth-century library comes billowing out. You quickly close the curtains—the embarrassment of anyone seeing the extent of the mess inside your Mac is too much.

The dust buffalo in your Mac aren't really an indication of your slovenliness (though they don't necessarily prove otherwise). Unless you've got one of the new fanless iMacs (or a very old Mac such as the Plus or the 512k—the very first Macs didn't have fans either), your Mac has a fan that constantly pulls dust into your case. Once there, the dust gets trapped, waiting for you to chase it out again.

Cleaning a Mac out is pretty easy, as long as you remember what it is you're dealing with. Your Mac's a sophisticated electronic device, folks—a few squirts of Pledge in the wrong place will likely cause all sorts of inappropriate behavior. Luckily, there's a way



COMPRESSED AIR IS THE BEST tool for cleaning your Mac's interior.

less likely to cause damage. If you go to a good electronics store like Radio Shack or Fry's (or photo supply places such as Edmund's Industrial Optics at <http://www.edmundoptics.com>), you should find cans full of compressed air. Buy one of these, and use it to blow the dust out of your case. Don't worry about damaging components—there's nothing inside a Mac case that can't take a blast of compressed air (do, however, resist the urge to poke things with the air can's straw).

To clean the exterior of the case, slightly dampen a rag and use it to wipe off accumulated dust. Don't use a commercial cleaning product—the plastic on the exterior will react badly to some cleaners.—IAN SAMMIS

become a better

shooter

Tired of seeing your name perpetually on the bottom of the kills list in Quake III? Take heart—we're here to make things better. We went to the experts—the ones who actually do this for a living (we only pretend to)—and convinced them to divulge their secrets. The panel included Frank O'Connor, editor, Dailyradar.com; Blake Fischer, editor, Next Generation magazine; Cliff Bleszinski, lead designer, Epic Games (creator of Unreal Tournament); and Dennis Fong (aka Thresh, world Quake champion), CEO, Gamers.com.

Step 1. Pregame Setup. Believe it or not, there are things you can do before you even step into a game, such as optimize your Mac for better frame rates rather than greater detail. Aim for 30 fps and above—while your game won't look as pretty, it will run more smoothly and you'll make more-accurate shots. Pow.



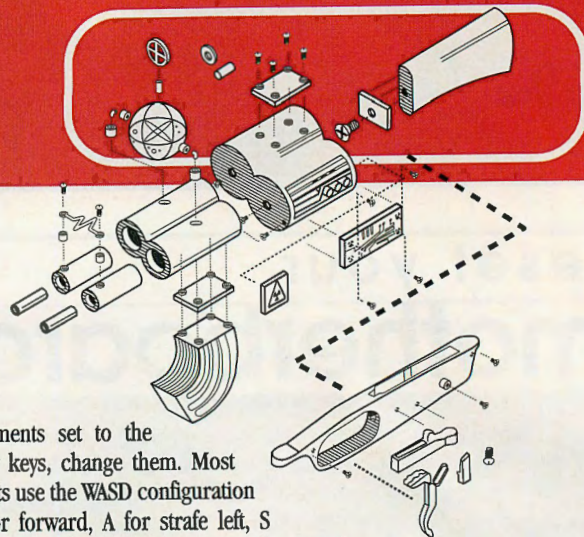
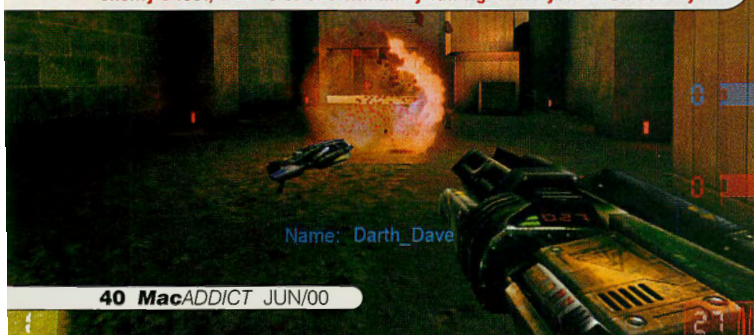
WANNA TALK GAMES? Do it at <http://www.macaddict.com/debate>.



FIND A QUAKE III demo, IPNetRouter 1.4.8, and Unreal Tournament accessories on The Disc.



THE ROCKET LAUNCHER IS GREAT FOR NOT-SO-GREAT SHOOTERS. And here's a tip—don't aim right at your opponent. Aim just in front of an enemy's feet, and he or she will likely run right into your shot. Buh-bye.



movements set to the arrow keys, change them. Most experts use the WASD configuration (W for forward, A for strafe left, S for back, D for strafe right, and the spacebar for jump).

Step 4. Stick to Your Guns. One of the most important parts of becoming a better shooter is learning how each weapon works and which one suits your style. If you've got a chronic twitching problem,



NINE OUT OF TEN EXPERTS AGREE: Becoming a better shooter boils down to lots of practice—tell *that* to your mother (or your spouse).

the railgun, which depends on accuracy, probably won't serve you well. The rocket launcher, on the other hand, causes tons of splash and shrapnel damage, so accuracy isn't as crucial.

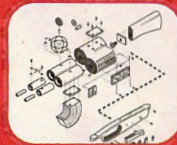
Step 5. Get the Upper Hand. Once you understand the weapons, it's important to get intimate with the levels. Thresh advises going through a solo game in God Mode—with all the weapons—to figure out each map. Do a lot of rocket jumping in different areas of the map to see if you can create any shortcuts. Here are some other techniques.

Camping. This is the process of sitting in one spot waiting for someone to pass you by, then killing 'em. Camp in well-trafficked areas (for instance, near powerful weapons and power-ups people will come looking for), and pop your opponents as they appear. Another good place to camp is in the rafters of a building (use the rocket jump to get there). The advantage of camping is that it pisses off other gamers (and that's just fun), and it helps you practice your shooting skills without having to worry about exploring. The downside is that in labyrinthine levels, you tend to get less kills than you would by tearing around like a maniac.

High-Traffic Rooms. Another effective way to score a lot of kills is to sit outside a high-traffic area, like the courtyard in the first level of Quake III, and drop lots of rockets inside. Party's over.

Take the High Road. Find areas where you can lure opponents into attacking when you have the advantage of being on higher ground. Watch them squirm.

Join the Chase. Look for two opponents who are chasing each other around—they're a couple of easy kills since they're likely already injured from their own battle. Cheap shot, sure, but nobody said we were above that. —CATHY LU

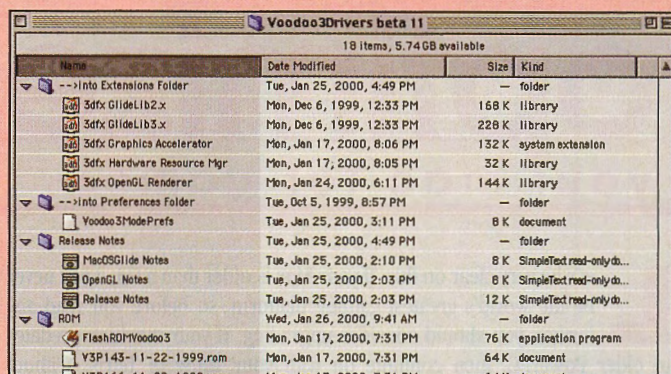


install a voodoo3 card

As the number and quality of games available for the Mac increase, so does the demand for better graphics. PC owners have long been spoiled in this department, but until recently Mac owners suffered a paucity of power in the 3D department. Now, however, it's possible to purchase a Voodoo3 card intended for a PC and with very little effort run it on a G3 or G4. The process couldn't be simpler—in fact, it's easier to install this foreign device on a Mac than on the PC systems for which it was intended. So much for plug and play.

Installing a Voodoo3 3000 PCI card is a breeze. Download the drivers from the 3dfx site (<http://www.3dfxgamers.com>), and the self-extracting file with drivers, extensions, and the Flash ROM burner software unpacks neatly on your desktop. Simply plug the card into an available PCI slot (with the power off, of course) and start up your machine. Drag the five included extensions into your System Folder and run the Flash ROM program.

Here's the only remotely tricky part: You'll receive a warning that the process will make the card unusable on a PC (you can restore it to PC compatibility with a separate program), and the installer will ask for the



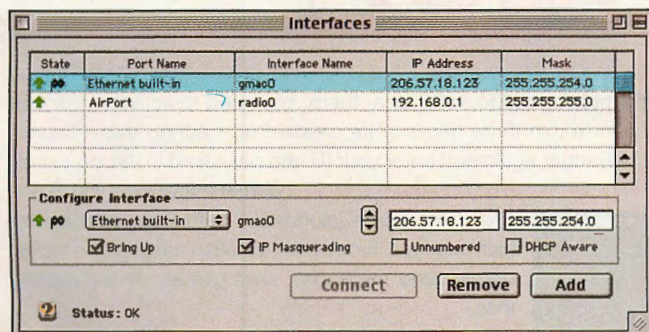
IT'S MUCH SIMPLER THAN IT LOOKS. The extracted folder of Voodoo3 Mac drivers appears just like this, with a simple, self-descriptive hierarchy, lots of help info, and pretty much no way to go wrong. As always, though, take a look at the read-me files.

file name of the ROM (it's included with the drivers). Type it in, and you're good to go. Shut down your Mac, plug your monitor into the new card, and start up again. Everything should run smoothly. You might want to adjust the monitor resolution on startup.

One caveat: These cards don't currently offer DVD support, so if you want to watch DVD material on your suitably equipped Mac, you'll have to plug the monitor back into your original card (probably an ATI). Also, since 3dfx doesn't condone the domestic use of these beta drivers, if anything goes wrong, you're on your own. —FRANK O'CONNOR

share a single network connection across multiple macs

The easiest way to share a single network connection is to designate one machine as a firewall. A firewall resends packets from one network (your home network in this case) to another (the Internet at large) after tagging them so it can recognize the replies and send them back through. This makes your firewall a protective gateway between the Internet and your home network. The firewall machine needs two network connections (usually a modem to connect to the Internet, and Ethernet for your home network). One very good, very inexpensive



AIRPORT BASE STATIONS ARE REALLY JUST FANCY FIREWALLS. With AirPort set to Computer To Computer (from the AirPort control strip module), other AirPort users can share the iBook's Ethernet connection. There's a bit more to a Base Station than this—you can't share the AppleTalk connection this way.

firewall program is IPNetRouter by Sustainable Softworks (<http://www.sustworks.com>). Just set up your network (see "Wire Your House Properly With Ethernet," p36), then configure the firewall as follows.

Step 1. Launch IPNetRouter. You'll see a window listing your various network connections; at the moment it should contain only your normal Internet connection. If this isn't active, connect to the Internet as you would normally.

Step 2. From the Configure Interface panel at the bottom, choose the connection that leads to your home network. Set the IP number (the first text field) to 192.168.0.1 and the subnet mask (the second text field) to 255.255.255.0. Click Add to bring up the second interface.

Step 3. Click the network connection that's hooked up to the Internet. Check the IP Masquerading check box, then click Add.

Step 4. On the rest of the machines on your home network, open the TCP/IP control panel. Give each machine an IP number of the form 192.168.0.x (where x is a number between 2 and 254), set their network masks to 255.255.255.0, and set their gateways to 192.168.0.1. Copy the DNS numbers from the TCP/IP control panel on your firewall to the rest of the machines.

You should now have all the machines in your house connected to the Internet through your firewall. While you can't host a game from inside a firewall, you and your cadre can go out and play multiplayer games hosted elsewhere on the Internet. It's time to form a clan and take on the world! —IAN SAMMIS

optimize

your mac for games

Let's be very clear on this: If your Mac is older than a G3, it will never be the world's greatest gaming platform, so before you read any further, you should consider upgrading. If your machine predates an older PowerPC, then continue on with your game of Tetris. Without further ado, here are some basic yet useful tips for squeezing the best gaming performance from your Mac.

Hardware

- **Graphics Card** An obvious solution, a PCI or AGP graphics card will definitely enhance your gaming experience. Look for a 3dfx (<http://www.3dfx.com>) Voodoo3 or an ATI (<http://www.atitech.com>) Rage 128 card (see "Install a Voodoo3 Card," this issue, p41).

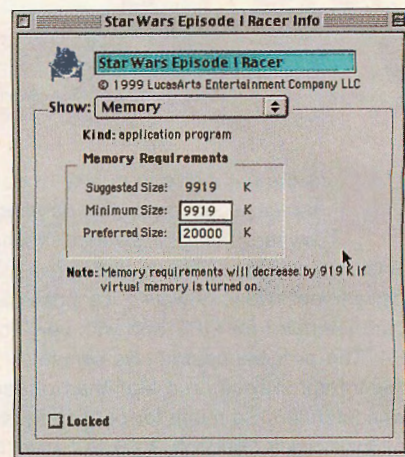
- **Processor Upgrade** A new processor board from the likes of Sonnet (<http://www.sonnettech.com>), XLR8 (<http://www.xlr8.com>), or Newer Technologies (<http://www.newer-tech.com>) can start bringing your gaming performance up to speed. If your system can take it and you find this option fiscally feasible (some boards cost almost as much as new systems!), a G3 or G4 upgrade might be the way to go (see *Reviews*, May/00, p44).

- **RAM** This is the malt liquor of gaming, an immediate, cheap, effective fix for gaming woes. The more RAM you have, the less trouble you'll run into. We recommend 64MB as a minimum, and 256MB more than covers any current Mac game (see "Buy and Install RAM," this issue, p38).

- **Drives** A fast CD-ROM drive (24X is nice) runs and installs games quickly. A DVD drive, also usually pretty fast, will enable your games to include high-quality streaming video. A quick hard drive is even better.

- **Take Control** Depending on the kind of games you like, you should invest in a six-button joypad, a three-button wheelmouse, or a flightstick.

MEMORIES... To change an application's memory allocation, select the game app icon (not an alias), then go to Memory under Get information. You can adjust the memory setting in the window that appears. Give it as much as you can spare.



There are dozens of different styles, so pick the one that best suits your budget and needs (see "Select and Program a Joystick," this issue, p45).

Software

- **Turn It All Off** Apart from hogging valuable memory, running more than one application at once (especially during a game) is a recipe for disaster and can cause crashes.

- **Adjust Memory Settings** Virtual memory may be a godsend for low-RAM individuals, but it's no friend of the gamer. If you have enough memory, keep virtual memory settings low (a meg or two more than the physical RAM you have installed). Also, give the game as much memory as you can spare.

- **Clean House** It's time to clear that dusty basement, the System Folder. Remove preferences and extensions for programs you no longer have or use. Turn off unnecessary extensions with Extensions Manager. The smaller and neater your System Folder, the faster your Mac (see "Clean Out Your System Folder," this issue, p33). —FRANK O'CONNOR

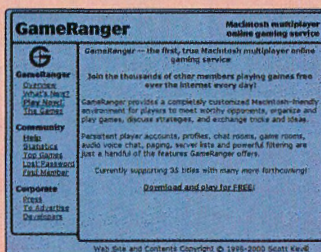
use

game ranger

Annoyed by the lack of Mac-only online gaming resources, Scott Kevill decided to do something about it. He created GameRanger (<http://www.gameranger.com>), a free online gaming environment that lets you search for and organize multiplayer games, chat with fellow gamers, and otherwise take part in the Mac online gaming community. Here's how to get going with GameRanger.

Step 1. Download Game Ranger.

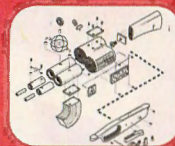
The download is small (around 150K), and installation is easy—just unstuff the file. When you're done, launch GameRanger and follow the onscreen prompts, which ask if you want to create an account or log in. Choose to create an account, then enter your email address and handle.



Step 2. Check Your Email. Your GameRanger account information will appear there. You need to activate your new account within three hours of its creation or it will go away. Launch GameRanger again and enter your ID and password in the log-in box.

Step 3. Join in the Fun. GameRanger logs you in and downloads some information before popping up the main interface. From there, you can move between chat rooms, send messages, start games, or join existing ones. —DAVID REYNOLDS

PCs NOT ALLOWED. Game Ranger is a great online gaming site just for Macs. It even has chats that have risen above the level of playground fights—now folks talk about Bob Saget and U.S.-Canadian trade issues.



play nice with strangers

Maybe they feel a freedom that springs from anonymity, but for whatever reason, people tend to act a lot ruder in the online world than they'd ever dare to in face-to-face encounters. Unfortunately, playing games online isn't too much fun if someone's calling you a \$%#@*%#\$ every few seconds. While Miss Manners and Emily Post haven't yet published gaming etiquette guides, you can adhere to some simple rules to make the experience better for you and your opponents—and spread a little love while you're kicking everyone's ass.

First off, a good way to discourage people from calling you a \$%#@*%#\$ in the first place is to learn the game before you join others online. Practice with single-player versions first, and read FAQs and read-me files online. You'll be a more competitive player, and everyone involved will have more fun, including you.

Different games have different rules. Stronger language is more acceptable in a game of Quake than in online Yahtzee, for example. Most people frown upon blatant swearing, and it can get you ousted—right quick—if you're on a monitored site. Even without monitoring, you don't have to get embroiled in a war of words—just ignore the offending party. Some sites, such as Blizzard's Battle.net, allow you to block unsavory opponents' slurs.

While we're on the subject of language, don't whine every time someone frags you. It's tiresome for other players, and just



games

KILLING YOUR OWN TEAMMATE may be fun, but it won't win you any friends in the long run.

because someone's beating you, it doesn't mean your opponent's a dirty, rotten, cheating \$%#@*%#\$. No one wins all the time, not even you. But consideration of other players, even when you're trying to crush them, will definitely make you more of a winner in our eyes.—**CARRIE SHEPHERD**

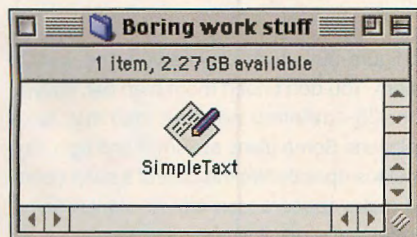
play games at work without tipping off the boss

No matter how you look at it, you were meant to play games at work—why else would Microsoft have included Solitaire (the biggest time-waster in the digital age) in every copy of Windows? Still, bosses don't often see it that way (they're a funny lot), so you have to be a bit surreptitious in your quest for entertainment while you're on the clock. Here are a few tips.

- Bring in your games on removable media. Some employers track what you do on the Web, so they might flag a 30MB game download as not work related—and that's one flag you *don't* want to capture.

- Change the icons of all the games on your

ALTHOUGH IT LOOKS almost like our familiar ubiquitous friend, this icon is actually a game of *Episode 1 Racer*. Pretty sneaky, eh?



Mac to SimpleText icons, and name them SimpleText. The same camouflage tactic works for the folders that contain the games. Give them boring, generic names like Work or Project.

- Keep your games in a folder that prying eyes won't investigate, such as the Apple Extras folder.
- Keep your headphones plugged into your Mac. You never know when a game will take it upon itself to double the volume. Along the same lines, remember that how you act in front of your Mac can telegraph your gameplaying to others—it's not often that you stand up and shout, "I kicked your ass!" when you're finished writing a Word document.
- Have a plan to bail should your boss approach. Know the game's quit key combination and be ready to use it at a second's notice. When a game asks if you want to save, prepare to sacrifice your progress by saying no. If all else fails, you can always either force-quit the game (Command-Option-Escape) or reboot (Command-Control-Power).
- Be aware of reflections. Just because your monitor isn't in your boss's direct line of sight doesn't mean he or she can't see you in the window.—**DAVID REYNOLDS**

play on

third-party maps

You've played Myth II until dwarves were hurling Molotov cocktails at you in your sleep. You've logged so many hours of Quake that you can frag an opponent while you're blindfolded, tied up, and heavily medicated. And don't even talk about your mad Unreal skillz. But now you're bored. You've won. Perhaps it's time to return to your job, your significant other, your life. Before you do something rash, though, consider hopping on the Web and downloading new maps for your favorite games—they can help stretch a bad habit into years of depravity.

Step 1. Update Your Game. With many games, a crucial part of getting new maps to work is having the most recent version of the game, so make sure you obtain the latest patches. You can download the latest versions of Quake and Unreal from <http://www.quake3world.com> and <http://www.wizworks.com/macsoft>.

Step 2. Locate Maps. Some games call maps levels, or they may even go by less obvious titles, such as mods (short for modifications) or plug-ins. Search the Web for maps—start with the developer's site.

Step 3. Download and Decompress. Because many games are cross platform, maps often come compressed in a Zip file format. Aladdin's Stuffit Expander (<http://www.aladdinsys.com>) can decode most Zip files, but for some reason not Unreal's maps—for this purpose,

Name	Expanded	Zippped	Saved	Method	Date	MB	LF
UT CTF-Aloft Read...	2 K	1 K	53%	Deflated	2/13/00	o	■
CTF-Aloft.unr	1597 K	521 K	67%	Deflated	2/20/00	o	o
2 items	1600K	522K	67%				

TO GET UNREAL maps to decompress correctly in ZipIt, you need to turn off the Line Feed option.

you'll need the shareware ZipIt (<http://www.maczipit.com>). You'll run into one more catch with Unreal: After you download a map and open it in ZipIt, make sure you have the Line Feed option turned off (the little box with the letters LF above it) or the map won't work.

Step 4. Put It in the Right Place. Many maps come with a read-me file explaining where to put the map. Many don't. Generally you should drop the map in a folder within the main game folder. In Myth, it's the Plug-In folder. In Starcraft and Unreal, it's the Maps folder. In Quake III, it's baseq3 (intuitive, eh?).

Once the map is in the right place, you're ready to go.—ROBERT CAPPS

Tip

Sometimes Unreal or Quake maps just won't work for one reason or another. If you come across one of these, just skip it—you'll find plenty of others out there.

start

a clan

If doing the solo frag has got you down, take comfort with others. Start a clan for your favorite first-person shooter, and you'll never have to frag alone again.

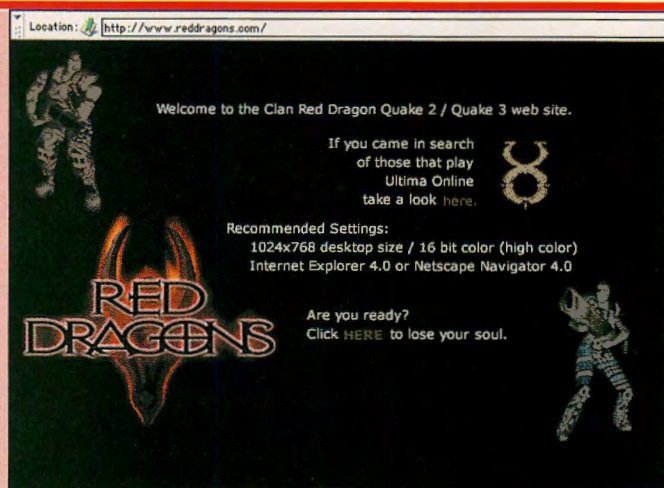
Step 1. Gather Your Team. You should have at least five members. You don't all need to have similar playing styles, but you should have similar bandwidth. No T1 clan should settle for a 56-K'er—that'd be like Julia Roberts dating Lyle Lovett (oh, wait a minute...).

Step 2. Create a Web Site. This can be as simple as black text on a gray background, hosted from your Geocities home page, or as elaborate as the Blair Witch site. Your Web site serves as a source for information and statistics, and a place where people can find you—add graphical doodads purely for your own satisfaction.

Step 3. Name Your Team. Create a team name and logo—individuality be damned. Being in a clan means developing a team identity, complete with name, logo, skins, models, and sometimes sounds. Note: Ruthless Bastards, CareBears, and Sweet Furry Animals are all taken, so you'll have to think of something else.

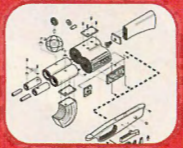
Step 4. Get Email. Designate an official clan address. There is a world out there, and someday it may need to contact you.

Step 5. Recruit Like Hell. Start hanging out on a particular server as if it were a 7-Eleven parking lot, and get to know other players. If you play regularly with the same people, you'll become



THE RED DRAGONS are among the most famous of the Quake clans (and we don't mean the religious kind).

familiar with their style and figure out which players you may want to recruit. Start chatting with them. You don't need more than five, but you may want as many as 16 or 25—definitely no more than that, since most servers tap out at 32 players. Some clans are small and tight, and always play together. Other clans operate like the cast of a soap opera; people drop in and out and make appearances with no explanation. It all depends on what you prefer—after all, it is your clan.—CATHY LU



select and program

a joystick

games

If you want to add punch to your gaming fun, it's time to think about a joystick. A stick is vital for aerial combat and pushing spaceships around the cosmos, but it can also do wonders in a 3D-shooter death-match. Properly used, it can turn a chronic victim into a frag master.

There are dozens of good sticks on the market today, running from \$25 to \$60. They may be simple, with no more than two or three buttons, or they may feature as many as eight or 10 buttons, as well as throttle and rudder controls—even a multiposition hat switch to allow up, down, side, and rear viewing. Posers can get away with less, but true gamers will want at least six buttons.

Touch also matters. A sensitive stick can send you bouncing all over the screen when you try to target an enemy. A soft stick may be more accurate, but it's also slower. In the end, it all depends on your personal gaming style.

Once you're plugged in, you'll want to customize your buttons. If you prefer a single powerful weapon for shooters—a rocket launcher, for

example—don't waste a stick function on weapon recycling. Leave that to the keyboard, and use your buttons for evasive actions such as crouching, jumping, and sidestepping. If you face a variety of enemies, each vulnerable to a different attack, you may want to assign stick buttons to get you to the proper armament quickly.

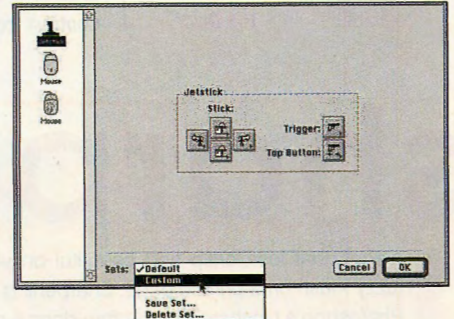
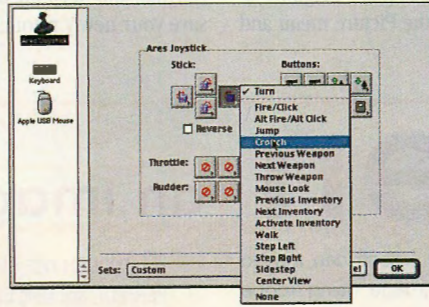
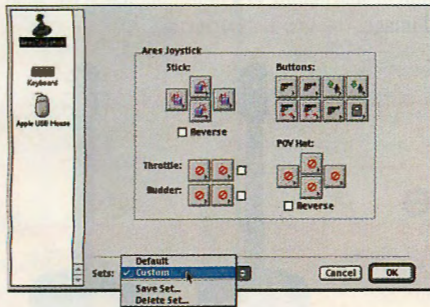
Most modern joysticks provide an autocenter control that calibrates and centers the cursor when your stick is upright, but at times your cursor will drift and you'll want to recenter. Most of the time, you can just rotate your stick through its extremes a few times to do the trick. Also, certain games may not support some joysticks, so you may have to program them by hand. The process varies from stick to stick, so check the manufacturer's instructions.

Once you've got your controls where you want them, dive into a game and see how much better you do. You'll experience a whole new attitude. You might even develop a swagger. —JOHN LEE

WITH YOUR CONTROL PANEL open, change the Default setting to Custom.

CH-CH-CH-CHANGES—pull down the menu of alternates for each button and make your changes, then click OK. (You have the option to save these settings for later games.)

NOT ALL STICKS ARE CREATED EQUAL. You may have limited options with older games and older sticks. Here, for example, is the control panel for Quake played with the CH Fighterstick.



break gaming

addiction

Your significant other is no longer significant. You're on your third and final warning at work. And your friends all have names like dethReaper666. Congratulations—you're officially addicted to gaming.

Even if things haven't gone quite this far, if you play a lot of games, you should be aware of their addictive qualities. Unlike a good book you rush home to read or a half-hour sitcom you never miss, games offer a different experience each time you play. As you become better, the adrenaline rush can indeed become addictive.

So how can you keep your gaming life a diversion in your life instead of, well, your life? Try a schedule, with a specific starting

and stopping time for gameplay each day. Make plans—preferably with other humans—out of the house. Get a puppy. Go out on a date (online dates don't count). Climb Mt. Everest. The more outside activities you become involved in, the less you'll depend on your daily dose of Quake for fulfillment. And if you just can't shake the habit, get a good therapist.

Of course, if you're like the sad souls at *MacAddict*, you could simply give in to your addiction. Before the credit card company notices you've lost your job, pick up a 450MHz G4, a Voodoo3 card, a year's supply of Ramen noodles, and Unreal Tournament or Quake III. We'll see you online. —CARRIE SHEPHERD

GRAPHICS

HOW-TO

graphics

clean up a photo for cheap

With the rise of inexpensive digital cameras comes the rise of mediocre photos. You can't fight the inevitable. What you can do, however, is make mediocre photos look their best—or at least better than they originally looked—and you don't have to spend a fortune getting the job done. How? With Graphic-Converter (\$30, <http://www.lemkesoft.com>), the wondrous shareware image editor. It's a whole lot cheaper than Photoshop (just over \$600, <http://www.adobe.com>), and it can do basic image correction (you may want to look into Photoshop LE at \$99, which might fulfill your needs). Here's how to go about using GraphicConverter.



GRAPHICS
GURUS speak
out in our forums
at [http://www
.macaddict.com
/debate!](http://www.macaddict.com/debate!)



Find
Graphic
Converter 3.8
and a FreeHand
9 trial on
The Disc.

Step 1. Open the photo you want to fix in GraphicConverter. Select the Levels item from the Picture menu. Click the Both button to set the black and white levels. If you need to give the image a little more contrast, play with the gamma control. Click OK to save the results.

Step 2. Select Brightness/Contrast from the Picture menu and



Fig. 1

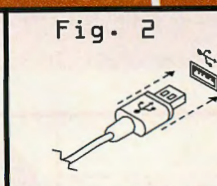


Fig. 2

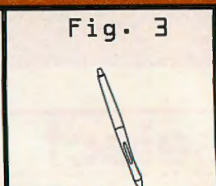


Fig. 3

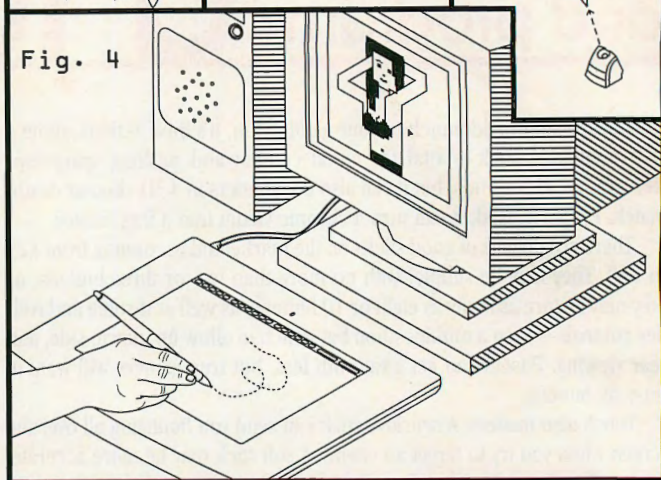


Fig. 4

start tweaking the controls. You can correct two things here: saturation and color shifts. First bump up the saturation a bit, then play with the color-shifting controls until you have something that looks good to you. Click OK when you're satisfied.

Step 3. Select Sharpen Edges from the Effect menu. You can tweak the sharpening controls a bit, but oversharpening an image is a great way to make it look lousy. Leave the radio buttons in the lower left set to Normal, and keep the amount of sharpening to a minimum. Click OK, then save your newly retouched image. —DAVID REYNOLDS

sharpen an image

Images that look crisp and beautiful on your screen can turn to fuzzy mush on a printed page. Sharpening an image, using Adobe Photoshop's Unsharp Mask, often does a snapshot good.

Located in the Filter menu under the Sharpen command, Unsharp Mask compares a pixel to those surrounding it and sharpens it based on values you specify through three controls: Amount, Radius, and Threshold. The controls are interrelated, and most likely you'll make small adjustments. Select the amount of contrast between a pixel and its neighbors by setting a value between 1 and 500 percent in the Amount field. Adjusting the amount of contrast too much can alter the colors in your image. For high-resolution printed images, Adobe recommends an amount between 150 and 200 percent. A value of 120 percent worked fine for our sample image on a 600-dpi DeskJet printer.

The radius determines the range of pixels in which the mask makes its comparison. We used a radius of one pixel in our sample. The higher the radius, the wider the sharpening. The effects of the radius are much more pronounced onscreen than on the printed page because one pixel on your screen represents a greater area than one pixel in print. This means you want to increase the radius almost to the point of seeing artifacts on screen. While a large value improved the brightness and sharpness of our image (on the right side) greatly, it also made the edges of the leaves on the guitar seem artificially jagged.

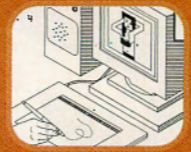
THOUGH THE RESULT ISN'T PERFECT, adjusting the Lightness Channel in Lab Color mode altered the contrast without distorting the colors.

The Threshold control determines the sensitivity of the comparison—in other words, it determines how different the pixels must be from one another before sharpening occurs. We used a value of 0, which sharpens all pixels.

If you're sharpening pictures of people, you'll want to pay particular attention to how sharpening affects skin tone. Choosing Lab Color from the Mode command in the Image menu will separate out a Lightness Channel, which you can select in the Channels palette. Applying sharpening to only that channel will affect brightness but not color.

Beware of unrealistic expectations. The Unsharp Mask filter cannot mend a badly taken photograph, but it can help a good image look even better in print. —NARASU REBBAPRAGADA





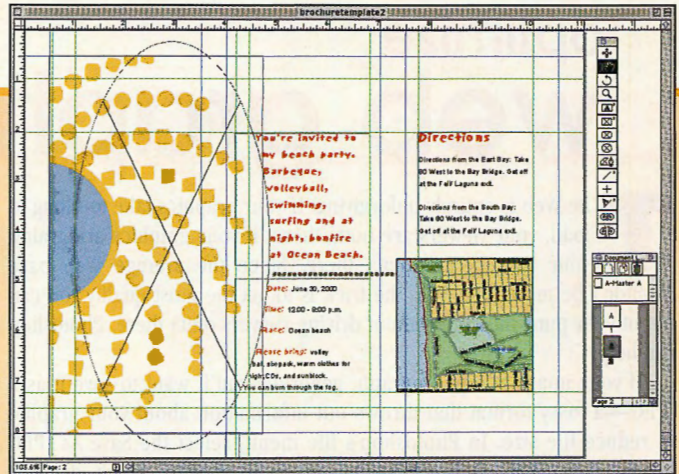
make a three-panel brochure

With page layout software, clip art, and an inkjet printer, you can make some pretty swanky-looking brochures with minimal effort. Throw in a drawing program, and the sky's the limit on this project. We used QuarkXPress, Macromedia FreeHand, and an HP DeskJet, but the concepts described here apply to whatever tools you're using.

Step 1. Create a new document in Quark from the File menu. Select the US Letter paper size and Landscape document orientation, and set 0.5-inch margins. Create a three-column page for the three panels of your brochure. Use a gutter depth of 0.5 inches between columns to separate the panels. (That's where you'll fold the paper.) Click OK.

Step 2. Setting margins on a master page will prevent art and text from getting cut off during the printing and folding processes. In the Page menu, choose A-Master A from the Display submenu. The page margins you just set should appear in blue. Drag green margin lines from the top and side rulers for the text margins. We recommend setting text margins one inch from the edge of the page and 0.25 inches from each inside panel guide. Go back to the Page menu and change back to Document view. You may find the guides annoying to look at while designing—toggling Show/Hide Guides (F7) from the View menu turns them on and off. Choosing Snap To Guides from the View menu (Shift-F7) helps you line up the objects with your guides.

Step 3. Insert a page in the new document you just created to make a three-sided brochure. The blue borderlines mark the three panels,



THREE FOLDS, ONE BROCHURE. By laying out your three-panel brochure using the right guides, your party is sure to be a brilliant success.

outside margins, and gutter margins of your brochure. The green lines are your text margins. If you set up a brochure as we described, the panels should look like those in the brochure pictured here.

Step 4. Lay out text and images to your liking—but we have some basic recommendations. Choose a font and color scheme and stick to it. A design can become so complex that it distracts from the purpose of the piece. We chose two fonts and three colors. Also, printing large blocks of solid color on an inkjet printer leads to banding, feathering, and overall poor print quality, so we stuck with a white background.

Step 5. Choose a heavyweight paper so the color won't soak through the page in double-sided printing. —NARASU REBBAPRAGADA

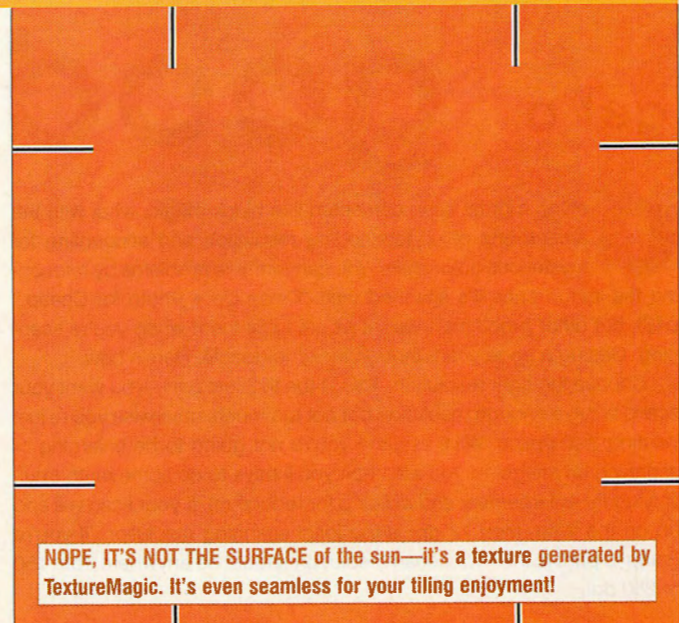
make seamless textures

Seamless textures are more ubiquitous than you might think: In addition to various Web folks who use them as backgrounds, game designers use them all the time for grounds, walls, and other 2D surfaces. At \$49, TextureMagic (<http://artissoftware.com/texturemagic>) is a bit steep, but you can use it to make some pretty nifty seamless textures in no time. Here's how.

Step 1. Open TextureMagic and select New from the File menu. The program will ask you to set the size and resolution for your texture tile. Click OK to accept the default settings.

Step 2. Start building your texture by filling in the space with a color. Click the front color swatch (the complete square in the bottom of the Tool palette) and select the color you want to use for your texture's base. Use the paint bucket to fill the tile with your base color.

Step 3. Choose another foreground color—ideally, one close to your fill color for aesthetic reasons (but go nuts if you want)—by clicking the front color swatch. Draw a few lines on your canvas with the paintbrush—maybe some zigzags. You'll notice that the line replicates all over the canvas. Select Twirls from the Canvas menu and click OK to accept the defaults. Save the changes. Congrats! You've created a seamless texture tile suitable for the Web or any texture-mapped application. —DAVID REYNOLDS



NOPE, IT'S NOT THE SURFACE of the sun—it's a texture generated by TextureMagic. It's even seamless for your tiling enjoyment!

GRAPHICS

HOW-TO

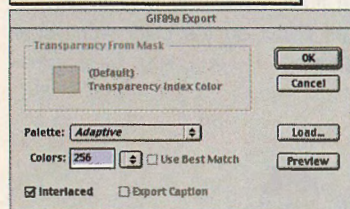
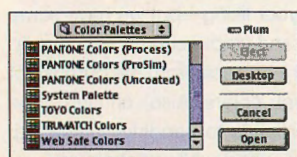
graphics

optimize

web graphics

The Web is entirely unforgiving: If your graphics take too long to load, your viewers are outta there; if your graphics are grainy, your viewers are outta there. Since the average Web page shouldn't be more than 50K, the trick is to get the most quality you can out of your puny little file without driving viewers outta there. Photoshop can help.

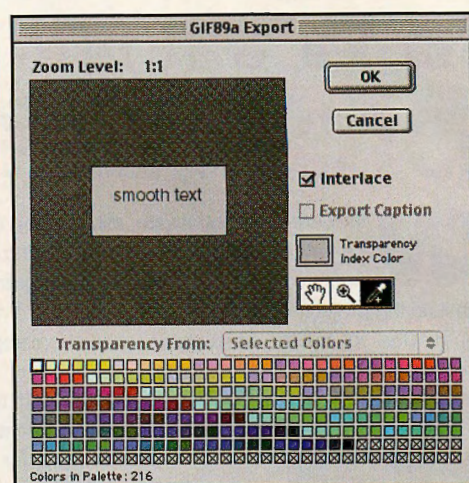
If your image is a photograph, generally you'll want to save it as a JPEG—a lossy format that throws out information about your graphic to reduce file size. In Photoshop's file menu, select the Save As JPEG format. The JPEG Options dialog box will appear, which displays options for image quality from 0 (low quality) to 10 (high quality). The visual difference in low and high image quality is minimal, but you save 12K by using the low-quality setting. If you're using the image at a small width and height, a low quality image will most likely be good enough for your purposes. (One side note—you'll want to convert the image to RGB color by selecting RGB mode from the Image menu.)



If your image is a logo or line art, or if it needs a transparent background, you should export it as GIF89a in the File menu. (If that option is grayed out, most likely you'll need to change the image to Indexed Color in the Image menu.) To ensure that most viewers will be able to view your

GRABBING YOUR GIF PALETTE from a pre-saved color file will keep your graphics true.

A TASKET, A TASKET, a 216-color palette. It's browser safe, and it offers a decent choice of colors for your GIF needs.



page, stick to the standard 216-color Web-safe color palette. In the GIF89a Export dialog box, click the Load button and navigate to the Palettes folder in your Photoshop Application folder. Choose the Web Safe Colors palette. This palette removes all extraneous colors from the file, reducing its size while making it viewable without dithering on all platforms.

On the Web, text can be your most challenging graphic, especially at small type sizes. Create your text in Photoshop in a strong, dark color. Remember to keep antialiasing turned on. This creates a smooth transition between background and foreground so the edges of your text appear less jagged. Crop your image area using Photoshop's Crop tool, and change the color mode to Indexed Color. When you see the Indexed Color dialog box, choose the Web Color palette. Export as GIF89a as you did in the step above. In the Export dialog box, select the background with the eyedropper tool if you want a transparent background. Click OK.

The Internet provides limitless publishing opportunities. As Casey Kasem might have said if he were designing a Web page, keep your file size down and keep reaching for the stars.—**NARASU REBBAPRAGADA**

get a

good scan

Getting a great scan can seem like black magic, what with the arcane arts of understanding resolution and accounting for mysterious color shifts. You can fix these problems by retouching the image once it's scanned (see "Clean Up a Photo for Cheap," p46), but other problems—well, it's best to fix them when you're scanning. Getting a good scan, though tricky, is doable. Here's how.

Choose the right resolution. This is the trickiest part—you want your scans to have enough resolution but not too much, otherwise you're just wasting disk space. We'll assume you're not going to be enlarging or shrinking an image—if you are, then you'll have to do some math (multiplying for enlargement and dividing for reduction). If your scan will end up on the Web, then 72 dpi is the ideal scanning resolution; if you're going to print it, then your scan resolution should be anywhere from 150 to 250 dpi.

Do a test scan to see if you have your resolution right. If your images are going online, scan a sample and drag it into a browser to see how it looks. For scans you'll output on a laser or inkjet printer, print a sample to see if you can see any signs of jaggedness. For more resolution tips, visit Sullivan's Scanning Calculator (<http://www.hsdesign.com/scanalc/welcome.html>), which provides helpful information on getting a great scan.

Whether you're scanning in color or gray scale, always make sure the bit depth is as high as possible. When you're scanning line art, make sure to scan it as line art with a bit depth of one.

Keep your scanner bed clean—a little glass cleaner and a lint-free cloth make short work of smudges.

Scan from the best possible original, because scanning can't make a bad image look any better.—**DAVID REYNOLDS**



prepare files for prepress

There's nothing worse than that sinking feeling of a print job gone awry, except perhaps the high cost of fixing it. We talked to Indian Rock Imagesetting in Berkeley, CA, for some surefire tips on *correctly* preparing four-color jobs for prepress.

Stay organized from the beginning.

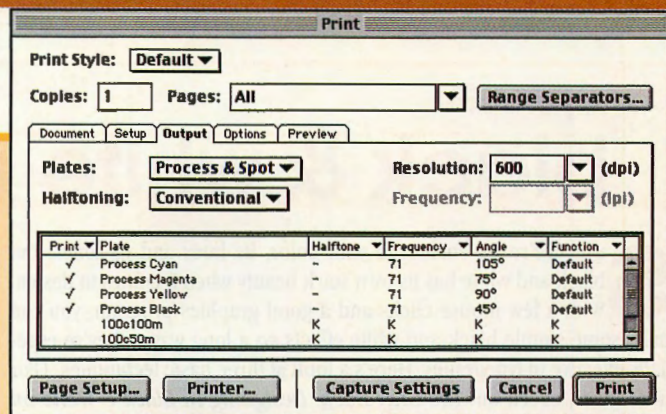
- Keep all fonts and graphics in the same folder as your job.
- Keep your font families together, even if you're not using all the weights provided. A missing font can lock up an entire job.

Set your document up right.

- The document size of your Quark or InDesign file should reflect the actual trim size of your printed piece. If you use bleeds, don't add the bleed area to your document size, just extend it 0.25 inch beyond the edge and your page layout software will add the crop marks.
- Think CMYK. When setting up your color palettes, only use blends of CMYK colors.
- As tempting as it is, don't use the bold, italic, shadow, outline, and other options your page layout software offers you. Unless the font supports that style or weight, your printer won't recognize it.

Design with press and paper stock in mind.

- If your job includes back-to-back pages with large areas of dark color, choose a heavy stock.
- If you use graduated screens or blends, don't start from zero per-



BY DESELECTING UNUSED COLOR SEPARATIONS, you'll save yourself—and your service bureau—unnecessary anguish.

cent—start from two percent. Between zero and two percent, the press can't accurately place the ink. If you're using rich blacks (blacks composed of percentages of all four colors) ask your printer for your paper stock's absorption limit.

Use EPS and TIFF graphics only.

- For photos, your resolution should be around twice the line screen of your job. For most 150 line-screen print jobs, an image resolution of 300 dpi should work.

- For line art (logos, illustrations), use a resolution of 600 to 1200 dpi.

Proofs: Use them wisely.

- Print out separations *before* sending the files to a service bureau. Select Page Setup from the File menu, click the Separations box in the Document Tab. Choose the C,M,Y, and K plates in the output tab, then make a print for your service bureau. —NARASU REBBAPRAGADA

color calibrate a monitor

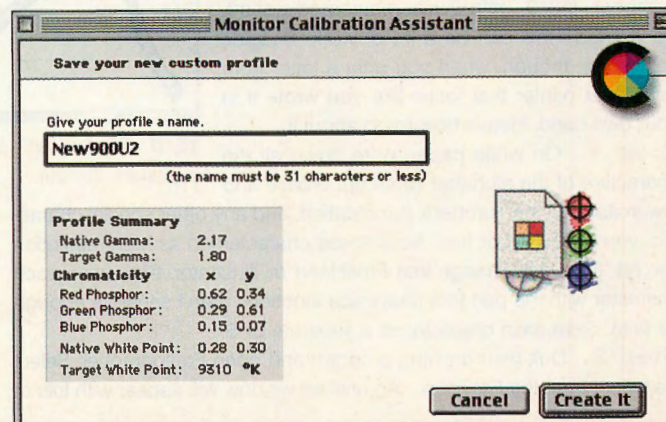
Ask anyone who has ever tried to print out a photo when they're using a badly calibrated monitor—what you see onscreen isn't necessarily what you'll get on paper. That's why calibrating your monitor is so important. Calibration can make up for aging phosphors in an older monitor, sharpen the midtones, and otherwise get what you see onscreen a little closer to what comes out on the other side. Here's how to use Mac OS 9's Monitors control panel to calibrate your monitor. Older versions of Mac OS have a similar calibration function, which you'll find in the Monitors or Monitors & Sound control panel, and Adobe Photoshop ships with Adobe Gamma, which can do much the same job.

Step 1. Open the Monitors control panel and click the Color button. You'll see a list of ColorSync profiles and a Calibrate button. Click the Calibrate button.

Step 2. The Monitor Calibration Assistant window will appear unless you have an AppleVision monitor hooked up, in which case your monitor will cheerfully calibrate itself (it'll flash various colors for about 30 seconds, then it's all finished). Check the Expert Mode box and click the right arrow. The Calibration Assistant will provide detailed instructions for calibrating your monitor, performing tasks such as adjusting gammas and white points.

Step 3. Once you've completed the Calibration Assistant instructions, the Assistant will ask you to save your new profile, which now appears in the Monitors control panel. —DAVID REYNOLDS

FINALLY—A USE for ColorSync! The Monitor Calibration Assistant will have your monitors looking their best in no time.



create

black & white effects

Sure, we're all enamored with color, its hues and its tones, but black and white has its own stark beauty when it comes to design. With a few mouse clicks and a good graphics program, you can make some simple black-and-white effects go a long way—they're especially effective in typography. Here's a look at three basic techniques. (For more ideas, check out *The Gray Book: Designing in Black & White on Your Computer* by Michael Gosney, John Odam, and Jim Benson.)

The reverse is perhaps the simplest black-and-white effect you can create, but it can be one of the most striking—especially when used as a drop cap at the beginning of a section of text. To create a reverse, make a black box and then put a white letter on top of it. It's that simple.

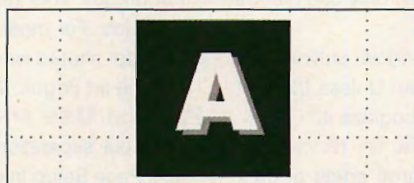
A drop shadow is another handy ubiquitous effect. Start with a reverse and add a drop shadow to it. Select the white letter, duplicate it, and make it gray. Move the gray letter slightly to the right and down from the original

D-D-D-DOUBLE VISION—properly placed grays can add a sense of softness and depth to a plain black and white effects.



letter, then bring the white letter to the top. You now have a drop shadow.

An emboss effect is a variation on the drop shadow—it's actually two drop shadows with different gray levels (one lighter, and one darker, layered behind an element. We'll build on our drop shadow from last time. Select the gray character and move it so that it aligns vertically with the white character but is offset slightly to the right. Change it to a darker gray (say 70 percent), then duplicate it. Move the third duplicate so it aligns vertically with the other two characters, then move it to the left of the white character. Finally, bring the white character to the front. —DAVID REYNOLDS

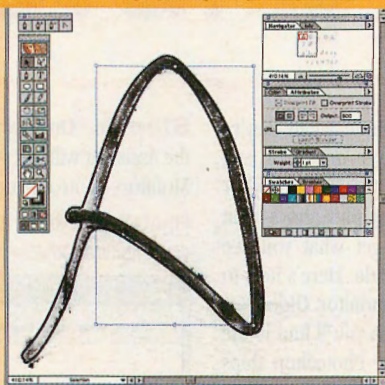


make a font from your handwriting

You've probably seen it on junk mail—the "open this letter" plea that looks as if someone wrote it by hand. Don't let this trick fool you; it's just a handwriting font the sender has used as a clever ruse to dupe you into opening yet another piece of unwanted mail. You can get your revenge by creating your own handwriting font with Macromedia's Fontographer (\$349, <http://www.macromedia.com>). Be warned—this can be a lot of work. Imagine your pride, though, when you print a letter from your laser printer that looks like you wrote it in your own hand. Here's how to go about it.

Step 1. On white paper, write down all the characters of the alphabet (both uppercase and lowercase), all the numbers, punctuation, and any other special characters you want in your font. Scan these characters in as high-resolution line art. Import the image into FreeHand or Illustrator, then trace each character with the pen tool (autotrace functions aren't sensitive enough for this). Save each character as a separate EPS.

Step 2. Quit your drawing program and open Fontographer. Select New Font from the File menu. An untitled window will appear with lots of



YEAH, SO I HAVE crappy, non-standard capital As. Sue me.

boxes, one for each font character. With the character A selected, choose EPS from the Import submenu of the File menu. In the dialog box that pops up, find the EPS you made for your uppercase A and select it. Fontographer will import it into that slot. Repeat this process for every character in the font.

Step 3. When all of the characters have EPS files associated with them, choose Generate Font Files from the File menu. In the Generate Font Files window that appears, leave the radio button on top set to Easy, then generate a Macintosh font—you can choose either PostScript or TrueType here. Enter a couple of font sizes separated by commas for your screen fonts. Finally, select a place for your newly generated fonts. When you're finished, click the Generate button. Fontographer will create the font suitcases.

Fontographer is a vastly larger program than we've made out in this glib little how-to. With it, you can create killer fonts, edit a font's metrics, or even change characters in an existing font—make sure you have permission. If you decide to purchase this program, explore it thoroughly—you'll find it worth your while. —DAVID REYNOLDS



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INTERNET

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internet

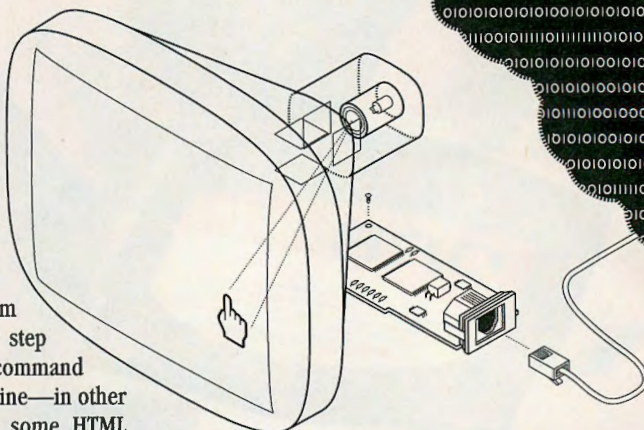
make your own portal



COME SEE US ON THE NET to discuss our Net projects! <http://www.macaddict.com/debate>

If you've ever left your bookmark list in your Web space as an HTML file, you know it saves time and allows you to access the list from anywhere. But we took this trick one step further and created an all-in-one Web command center to help you organize your life online—in other words, your own portal. You'll need some HTML knowledge; plus, if you're fairly new to Web design, check the "Plug-In" section of <http://www.macaddict.com> for sample code you can steal!

Step 1. Plan your tools. Since this mega page consists of several frames, spend a few minutes



figuring out what you want to include. You'll probably want email, weather, a search option, links, and news. The easiest way to break up the page is to put the links in one frame down the left side, with the news and other tools split into two frames in the main area. You'll also need to name

pack your portal

Here are a few places where you can find cool stuff for your portal.

Email

If your favorite Mac.com address is taken and you need a comprehensive list of free email services, go to <http://www.emailaddresses.com>. If you just want to check your existing email from a browser, take a look at <http://www.mailstart.com> or <http://www.readmail.com>.

News

If you're willing to put up with Java, a number of services supply free Java headline applets—you can find one list of them at 4FreeContent.com (<http://www.4freecontent.com/tickers.htm>). For the multiframe approach, it's easier to load someone else's news service—for example, Newshub (<http://www.newshub.com>)—into its own frame.

Weather

Our favorite site for checking out the weather is Weather Underground (<http://www.wunderground.com>).

Search

Most search engines feature cut-and-paste HTML you can fit right into your page; it's usually lurking in the Help or Tools section. The HotBot interface in our sample code is on the HotBot Tools page at <http://hotbot.lycos.com/help/tools>.

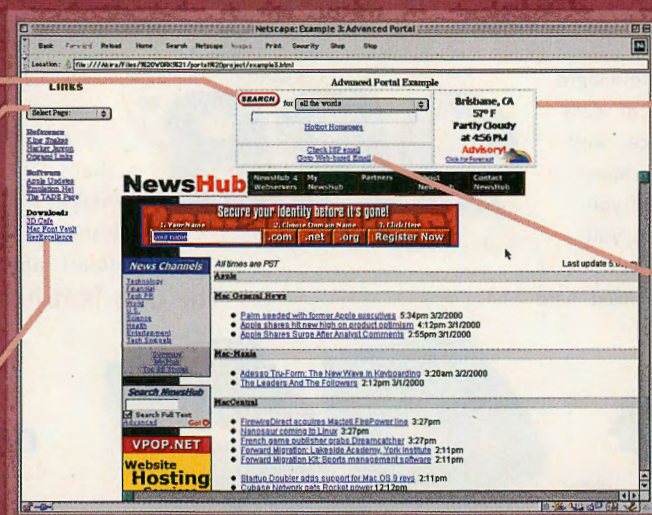
Other Stuff

For fancy, tricked-out labels, look at Flaming Text (<http://www.flamingtext.com>), an interactive Web page that lets anyone quickly and easily design awesome banners, buttons, and labels. If you're curious about what the stars hold for you, check out Gizmo from Zappa (<http://www.zappa.com>) for a free horoscope service.

Hotbot search engine.

Drop-down menu. This menu loads pages in the entire space to the right of the link list. To add an entry, give the OPTION tag a NAME attribute consisting of what you want to appear in the menu, and a VALUE attribute consisting of the URL.

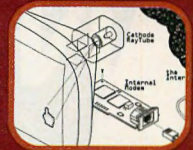
Link list. Again, you'll need to use the TARGET tag to send your visitor somewhere. If you'd like the links to appear in the visitor's window, set TARGET to _blank.



Weather information provided by Weather Underground.

Simple email hyperlinks. Make sure to include the TARGET attribute in your HREF tag, or else you won't see them when they finally load in this short frame. In this case, we used TARGET=news, which sends the pages to the same frame we used for the Newshub page.

SCREW YOU, YAHOO. Here, we've created our own, custom portal page.



each frame; we used **index** for the list of links, **news** for the news page, **tools** for the collection of extras, and **body** for the tools and news area.

Step 2. Prepare the link list. This is the easiest page to code—just compile the addresses of your favorite places on the Web into a list of links. You'll want to include a **TARGET** attribute in the **HREF** tags to send the links to the main frame; for our example, we set **TARGET** to **body**. Save this file as **links.html**.

Step 3. Prepare the tools. You'll need to set up an email address, choose a search engine, and grab the relevant source code to paste into your own page. Then lay out the elements of the tools in a table that will go at the top of your main area. Keep it short and wide so you don't lose too much vertical space in your browser. Save this file as **tools.html**.

Step 4. Put it together. To stitch this together into a useful Web page, you'll need two frame sets (a frame set is a small HTML page that allows you to include two or more other HTML pages). One frame set will combine your tools file from step 3 with your news service, so you should create two rows for this. Label the top frame **tools** and give it a size just large enough to display everything in your **tools.html** file—ours wound up 150 pixels tall. Call the other frame **news** and point it to your news service. Save this file as **body.html**. Then create one more frame set with two columns. Call the left column **index** and have it load your **links.html** file; it should be 150 to 200 pixels wide. Call the other one **main** and have it load your **body.html** file. Save this frame set as **index.html** and load it into your browser. One final refinement you might find useful is to add a link in your link list to get back to your tools and news page. Point it to the **body.html** file, with **TARGET** set to your main frame.—**RICH PIZOR**

avoid stalkers and avoid becoming a stalker

No matter which end of it you're on, stalking is never a healthy thing. Luckily, keep a few basic rules in mind and you can easily avoid playing the role of either stalker or stalker—even in the information age.

To avoid stalkers, adopt the New York City streetwise mentality—don't talk to, look at, or acknowledge anyone online. Of course, you don't have to act that extreme. You *can* talk to people—just don't reveal any personal information, such as your address, phone number, or even last name, unless you're positive you want to. Also, don't use your real name online, because that makes you a target for a quick call to 411. It also helps if you don't use a provocative screen name like *Pussycat* or *Hotgirl*. We're not old-fashioned—we understand the concept of love in the digital age. Just don't reveal too much info, exchange pictures, or agree to meet in person too early in the relationship. If you can't even trust your neighbor, you certainly shouldn't trust some random person you met online.

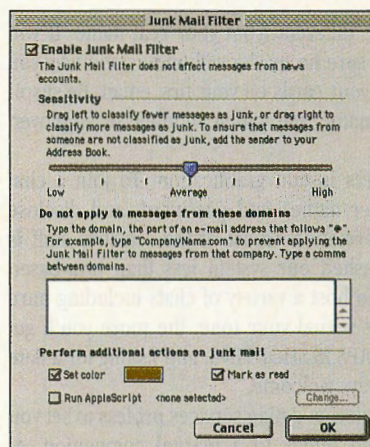
On the other side—well, it's up to you to realize when you're starting to seem creepy. If you find yourself Instant Messaging someone every time he or she is online—with no response—or if you've sent five unanswered email messages (no, the server didn't eat them *all*), it's time to cut yourself off before you officially reach stalker status.—**CATHY LU**

control spam

internet

Junk email, also known as spam, is here to stay. You probably can't avoid it completely with any effort short of running over your modem with a steamroller, but you can take steps to loosen its grip on your online life. Here are ways to keep spam out of your email in-box.

- Keep a low profile. Every time you post a message to Usenet or a message board, enter an online contest, or otherwise put your email address out there, spammers can harvest. It doesn't make sense to keep your email



SPAM—WE HATE THE FOOD, and we hate it even more when it shows up in our in-box. Luckily, the junk-mail filter in Outlook Express can help you spot spam—but Outlook won't sweep it under the rug for you.

address totally hidden, but think twice before you share it. You may even want to set

up a free Web-based email account (for example, Hotmail or Yahoo mail) just for Net use and as a spam repository.

- If you're an AOL member, simply having a member profile is all it takes for spammers to find you. Go to keyword Member Profile to remove your profile and make your address harder to find.
- Don't add yourself to opt-in advertising lists. Don't even add yourself to opt-out lists, which provide convenient lists of email addresses for unscrupulous spammers.
- Use mail filters to deal with spam before you see it. For instance, you can create filters that look for messages with subject lines containing **ADV:**, **\$\$\$**, and **MAKE MONEY**, then toss them in the Trash. Outlook Express 5 includes a junk-mail filter that can make spotting spam easier, but the program won't delete it automatically unless you add an AppleScript yourself.

Despite your efforts, some junk email will land in your box. Now what?

- The speediest retaliation is to press the delete key and forget about it. Whatever you do, don't buy the crap that spammers hawk—not only will you encourage them, but the transaction will likely disappear.
- Don't press the reply button to give the spammer a piece of your mind. At best, your email will bounce back, unread. At worst, the spammer will have assurance that your email address is valid and will send more junk your way.
- If you want to make spammers lose their Internet access, send a message to their access provider. Visit <http://www.abuse.net>, an informative site that provides tools for effectively complaining to the powers that be.—**KEVIN SAVETZ**

INTERNET

HOW-TO

internet

meet someone

online

These days, everyone knows someone who's met his or her significant other online. With much of the stigma removed from Internet socializing, we thought we'd give it a shot. We gleaned a few tips from our wayward experience to help you have more fruitful communication.

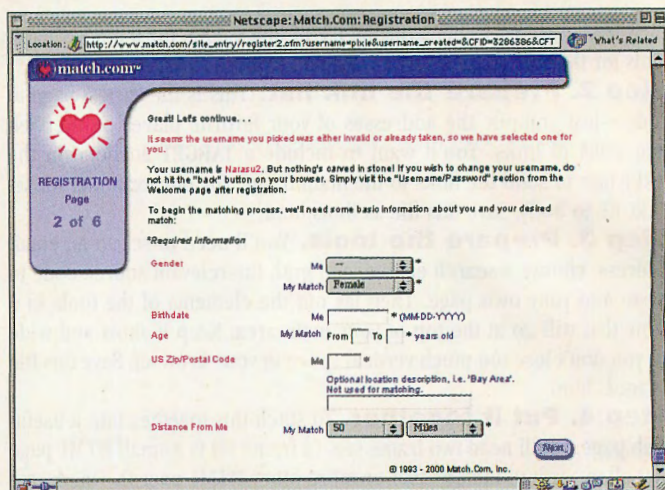
Step 1. Create a separate email address for your cybercourting: With the enormous volume of free email accounts out there, it's a 30-second step that will protect your privacy.

Step 2. Choose a user name different from your real name: If you meet that special someone, we're sure he or she will understand why you initially chose not to put down all your cards on your first email. Be suspicious of people who ask for your name, age, phone number, or employer.

Step 3. Pick your medium.

Chat rooms. Chatting offers instant gratification. To join a chat room, you choose a handle (user name) and password, and disclose varying amounts of personal information (most of the sensitive stuff is optional). HTML-based chats crashed our system less than Java-based ones. Portals like Lycos and Yahoo host a variety of chats including pure romance rooms, where the more sexual your tone, the more you'll get noticed. Brief etiquette tips: ALL CAPS IS SHOUTING, and fishing for a date in subject-oriented chats isn't always welcome.

Dating services. Many Internet dating services profess to set you up with anything from a museum buddy to a marital companion. At Match.com, an excruciatingly detailed survey entered us in a vast database of would-be suitors. We hit a glitch when Match.com claimed it would never disclose your "real" name and email, yet a bug caused the site to



EK, NOT A REAL NAME! We weren't able to access this account to change the user name.

create not one but *two* accounts showing one *MacAddict* editor's real first name. The accounts wouldn't recognize the email addresses used to create them, so we had no way of changing the user name to something that had a little more anonymity. Matchmaker.com required less personal information, though the essay question was a little tedious.

Forums. Sites like Mingles.com have forums where you can post your comment or query and wait for a response. While this is the least intrusive option, it's also the slowest and least entertaining. If you're just looking to get your feet wet, though, it might be for you.

Step 4. Making it real: You're not stupid, so we'll spare you the lectures. When you meet the iPerson of your dreams, be careful. Choose well-lit, public meeting areas until you know with whom you're dealing. —NARASU REBBAPRAGADA

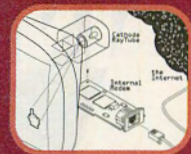
avoid being a jerk on the internet

Anonymity does strange things to people. Suddenly, you can say whatever you please without having to worry about someone smacking you in the face. The World Wide Web is yours, and you can run rampant! Right? Wrong! Despite the fact that you very rarely have to face up to what you do online, you still don't have the right to be a jerk. Here are some Netiquette tips.

- It all seems so impersonal—talking to a computer monitor. But despite what those electrons might be doing to your brain, you don't have carte blanche to say whatever you please. Remember, someone on the other end is reading what you're writing. A good rule of thumb: Only write what you would dare say to someone's face.
- We've all received one—the endless group email from some long-lost friend explaining what she has been up to since you all graduated from college. You're not heartless, you just don't have time to read an electronic epic about the past two years of someone's life. Respect people's time. That also goes for forwarding stupid chain emails to friends about untrue health scares, computer viruses, and

so on. Sure, it's nice to show concern for a friend—but next time send money.

- Beware bandwidth. We all love sending little movies of whales blowing up that we found on the Web and high-res pictures of our cats. But it's important to remember that not everyone has a T1 line and can download large image files quickly.
- Get a sense of where you are. There are different forms of acceptable behavior on the Net. Feel free to be as rambunctious as you want in a Rancid newsgroup, but tone it down in a chat full of prostate cancer survivors. Familiarize yourself with the tone of a chat or newsgroup before opening your mouth.
- Don't assume people know what you mean. Sarcasm, for instance, doesn't always come through in email. Supplement with a smiley emoticon to indicate that you're joking. Got it? :-)
- Be coherent. Use a spelling-and-grammar checker if you're admittedly not a wordsmith. “=i need yor hulp, Rite bac” is not how sound, sane people correspond. —CATHY LU



do a good web search

With all the junk circulating on the Net these days, it's almost impossible to avoid bad links, outdated information, and the omnipresent porno factor. But with a few simple revisions to your hunting habits, you can narrow the line between quick, easy search results and deargodwhatsallthiscrap.com. Which search engine is right for you? It all depends on what you're looking for.

First of all, it's important to remember that the big boys and girls (Yahoo, Altavista, Excite, Lycos, LookSmart, and so on) have their place. These days they tend to differ mainly in design and layout, making your choice more a matter of personal preference than a performance issue. However, all of them offer extremely effective ways of organizing and categorizing results. Many provide additional services lesser-known sites don't offer, such as email and news topics. And they are definitely the easiest tool for browser novices.

One way to avoid dead links (like the many you find on popular search engines) is to skip straight to sites you know recently worked for someone else. Directhit (<http://www.directhit.com>) uses a time measurement method when compiling its research results. The longer you stay at a page you reached from Directhit or another site that uses this technology, such as Hotbot (<http://www.hotbot.com>), the higher that page moves in the results lineup for the next searcher. Another engine, Google (<http://www.google.com>), tracks how many other pages link to the pages it lists, then uses that number as a sorting criterion. The more outside sites



IT AIN'T PRETTY, but it works—the more sites that feed into a URL, the higher up that URL appears in the search results.

feed into a particular page, the higher up it moves in your Google list of potential places to visit.

Know exactly what you're looking for? Askjeeves.com lets you type in specific questions, such as "How do I contact my congresswoman?". It can help you avoid slogging through all kinds of trash—everything from politicians touting or trashing five-year-old voting measures, to zealots going on about why you should still worry about Y2K.

If you really want your work done for you, though, try searching for a category-specific links site. For example, Ultimate Band List (<http://www.ubl.com>) offers the latest band news, and at Petlinks (<http://www.petlinks.com>) you'll find out everything you ever wanted to know about your furry, four-legged friends and other pets. Find out if a site exists for your area of interest by typing a term and the word links in any search engine.—JOEL ENOS

find free webspace

Looking for a cheap place to put pictures of your cat or that ode to Beck? Plenty of sites provide free Web hosting—just throw together some HTML and pictures of your Hello Kitty collection, and you've got yourself a Web page. Most free hosts allow you to create Web pages using your favorite HTML editor or (for true nerds) by hand-coding. Some even offer ultrasimple online Web page creation tools that let you create a page without special software or HTML knowledge. Just make sure you shop around for the features you need before deciding on a Web host. Be forewarned: A free server will subject your visitors to banner or pop-up advertisements. If you can't stomach that, you'll have to pay for a commercial Web host.

Some of the places you can find free hosting include:

iDisk (<http://itools.mac.com/itoolsmain.html>) Mac OS 9 users can store up to 20MB on their iDisk, including their very small Web pages, or use one of Apple's pregenerated templates.

Tripod (<http://www.tripod.lycos.com>) Tripod offers Web weavers 11MB of free space, including advanced features like a CGI and JavaScript library.

Xoom.com (<http://www.xoom.com/webpace>) offers unlimited space for your pages, an archive of free clip art, and other fun features.

50megs.com (<http://www.50megs.com>) serves up a whopping 50MB of space. The optional Pro version allows you to serve ad-free pages for \$5.95 per month.

Lists of other free Web hosts are available at <http://www.123freepage.com>.

—KEVIN SAVETZ



FEELING CHEAP? Visit Tripod. Advanced features include Perl scripts and custom domain names.

INTERNET

HOW-TO

internet

keep track of user names & passwords

For years, PC people have been bypassing their passwords with fingerprint identification devices such as the U-Match BioLink mouse. Though CompuLink (maker of BioLink) has plans to release a Mac version of its biometric-based mouse by year's end, until then we Mac folk have to make do with the old standby: written passwords—for everything.

With the keychain feature, OS 9 does offer some relief from occupying a bunch of our personal memory blocks with endless passwords for online banking, Amazon—whatever. Now you can use one password to get to the myriad others stored in your keychain's memory. But you still have to make up those other passwords—and even if you don't have to remember them anymore, you still want to make sure no one else figures them out. So here are a couple of pieces of advice people don't follow as religiously as they should when it comes to picking passwords.

- We all know not to use our middle or last names, or our children's names, right? Well, it's a good idea not to use any names at all. If you do, mix them up a bit. Someone might figure out "Sebastian," but "Sebastian761" is obviously more obscure.
- Replace letters with numbers. For example, in a word like *mantra*,

CUTE AS A MOUSE, the BioLink takes your thumbprint and only gives access to certain users.

Expect a Mac version by the end of the year.

substitute 3 for a (m3ntr3).

- Don't use the first word that comes to mind. You'll never believe how many of us use "Valentines" or "coffee break" just because of what time of year or day we happened to log on.
- Don't rely on the same code for everything—use variations. If you always have some form of "Supercalifragilisticexpialidocious" as your password, no one else will figure it out, but you'll know it's either "califrag" or "expial" when you're wracking your brain to get in.
- Change your passwords periodically. There are times when you have to let your mom use your AOL account—and while you *trust* her, you never know when she might go sneaking into your email again. —JOEL ENOS



deal with

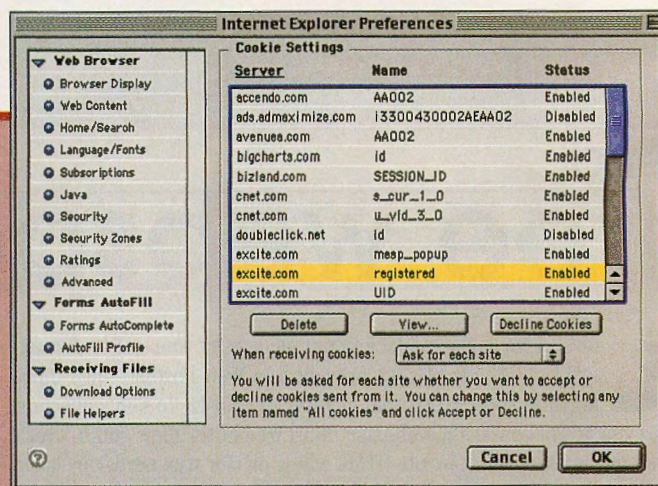
cookies

In the most surreptitious of ways, Web sites keep notes about you, thanks to cookies—not the fattening kind. A cookie is simply a note that a Web site leaves on your computer's hard drive—they're roughly analogous to the Preferences files that your applications leave in the System Folder.

Cookies store information you give a site so that next time you visit, the site remembers your preferences. For instance, if you tell a site that you prefer to see the frames version and that you use an iMac, the site can stash that data. The next time around, it will use frames and tell you about new iMac software.

Cookies can only store information you provide. A site can't get your email address, for example, unless you enter it somewhere. Some people don't like cookies because advertisers can use them to send targeted ads. After you visit several Web pages about Pokémon, you could start to see more banner ads for, say, Pokémon underwear.

To control how Netscape Communicator handles cookies, choose Preferences from the Edit menu, then click Advanced. You can accept all cookies (the default), accept only cookies that get sent back to the site you're visiting (a sensible alternative if you're worried about advertising sites tracking you), or not accept cookies



INTERNET EXPLORER lets users fine-tune their control of cookies, blocking out sites that use cookies for targeted advertising.

at all (for militant cookie-hating surfers). You can also tell the browser to warn you every time a site places a cookie on your computer, though this can get annoying quickly. To see your cookies, find the file named MagicCookie in your system and view it with a text editor.

In Internet Explorer, choose Preferences from the Edit menu and click Cookies under the Receiving Files tab. The options range from Never Allow to Never Ask. You can enable cookies on a site-by-site basis, as well as view and delete individual cookies. Find more info about cookies at <http://www.cookiecentral.com>. —KEVIN SAVETZ

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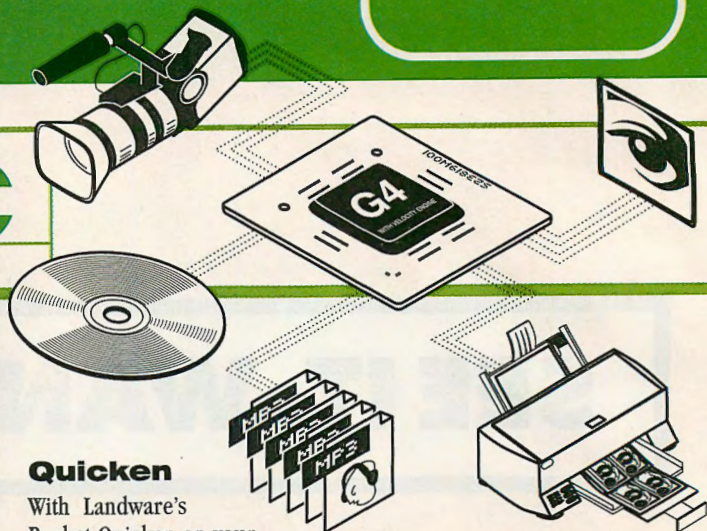
PRODUCTIVITY

HOW-TO

productivity

hotsync

your mac data



If you find absence from your Mac a painful experience, you can always take a piece of it along with you—without spending \$1,500 on a new iBook. With the supercompact Palm and a couple of third-party apps, you can transfer data between your Mac and Palm with practically a mere snap of your fingers. You probably know already how to HotSync the four built-in Palm applications with the Palm Desktop application on your Mac, so we're going to show you how to HotSync email, email addresses, Quicken data, and Word and Excel files.

Outlook Express Addresses

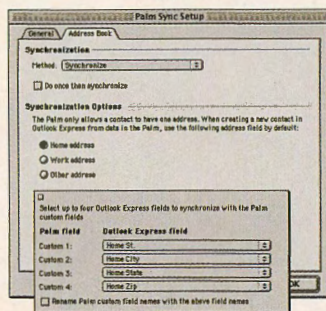
To get Outlook Express and your Palm on the same wavelength, synchronize the Microsoft Outlook Express address book with the Palm Contacts application.



DISCUSS
PRODUCTIVITY or avoid
being productive at
[http://www
.macaddict
.com/debate](http://www.macaddict.com/debate).

SYNC IT.

Transferring
addresses to
your Palm from
Outlook Express
and vice versa is
as easy as 1-2-3.



Step 1. Install Outlook Conduit using the Palm Sync installer (in Outlook's Extras folder).

Step 2. Select Palm Sync Setup from Outlook's File menu, then choose the Enable Palm Synchronization option.

Step 3. Click the Address Book tab and match any four Outlook Express fields with the corresponding custom fields on your Palm.

The two address books will now synchronize every time you HotSync your Palm. (To stay on the safe side, make a backup of your Palm's User Data file first. It's in the Palm Users folder.)

Outlook Express Email

If tearing yourself away from email is even harder than tearing yourself away from your Mac, you can synchronize Outlook Express email with the Palm's built-in Mail application using ActualSoft's MultiMail Conduit Pack (\$30, <http://www.actualsoft.com>). MultiMail Conduit can also sync Claris Emailer and Eudora Pro and Lite.

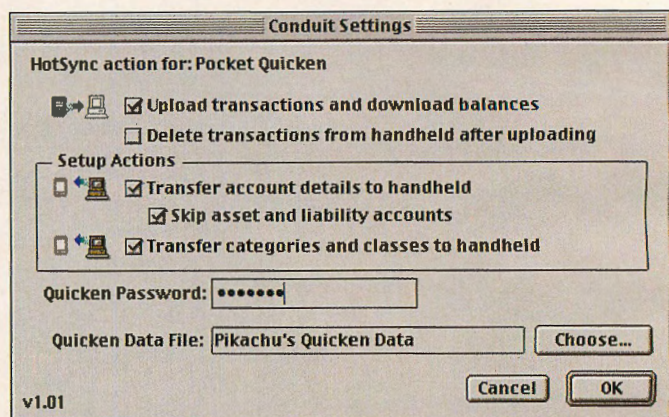
To synchronize your email, drag the MultiMail Conduit into the Palm Conduits folder, launch the Palm HotSync Manager, open the Conduit Setup (Command-H), then set up your preferences.

Now, every time you HotSync, new email and replies you've composed on your Palm appear in Outlook Express, ready to send. You and your email never have to be apart again.

Quicken

With Landware's Pocket Quicken on your Palm (\$40, <http://www.landware.com>), data you enter on the road uploads into Quicken 2000 on your Mac every time you HotSync.

Drag the Pocket Quicken conduit into your Palm Conduits folder. Then, in Palm Conduit Setup, tell the conduit where to find the Quicken 2000 data file. Enter your Quicken password if you have one.



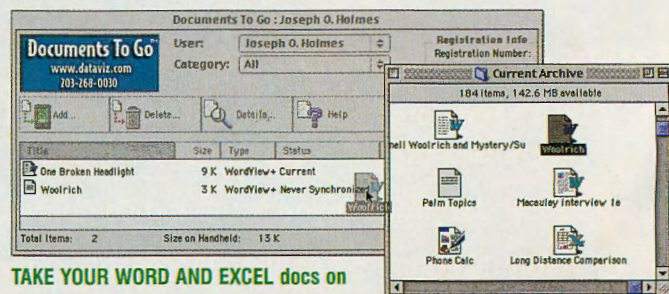
TAKE THE MONEY AND RUN. With Pocket Quicken, you can take care of money matters on your Palm.

Microsoft Word and Excel

Documents To Go (\$40, <http://www.dataviz.com>) keeps a read-only copy of any Microsoft Word, Excel, ClarisWorks, or AppleWorks document on your Palm, updated every time you HotSync. If you don't mind squinting at docs on your Palm, then go for it. It's better than crib notes.

Just open the Documents To Go application on your Mac and drag the document into its window.

Documents To Go preserves Word formatting, styles, and even tables. —JOSEPH O. HOLMES



TAKE YOUR WORD AND EXCEL docs on
the road with Documents To Go.

SEPARATION ANXIETY? No worries—MultiMail Conduit ensures
that you can commune with your email 24/7.



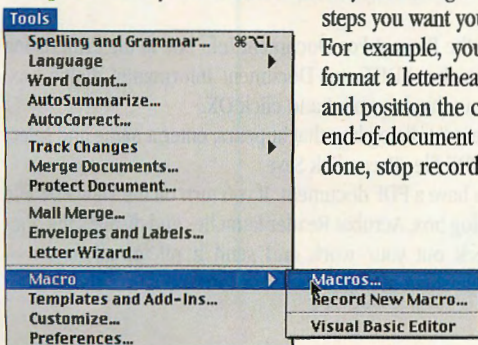
create macros

Tired of repeating the same tasks over and over? Wish there was a way to automate a job so one button does it all? The macro feature in Word and Excel makes that possible—and easy. In fact, you'll wonder why you didn't do it before.

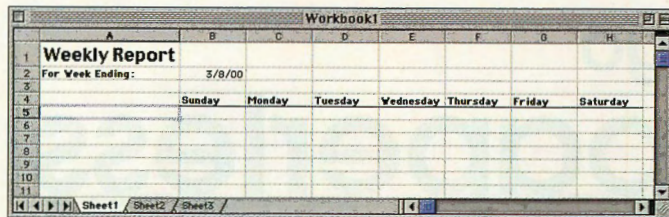
In Word

Step 1. Go to the Tools menu and select Record New Macro under the Macro option. In the Record Macro dialog box, enter a name for the macro. Click OK.

Step 2. Now you should see the tiny Recording toolbar. Perform all the steps you want your macro to perform. For example, you can have a macro format a letterhead, insert today's date, and position the cursor right above the end-of-document marker. When you're done, stop recording.



THIS IS NO VIRUS. Good macros allow you to automate Word and Excel documents.



MAKE WEEKLY EXCEL REPORTS a little less tedious by creating macros that fill in standard information for you.

Step 3. To run your macro, go to the Tools menu and select Macros under the Macro option. In the Macros dialog box, select the name of the macro you want to run and click Run. See your macro run without lifting another finger.

In Excel

Step 1. In the Tools menu, select Macro, then Record New Macro. In the Record Macro dialog box, enter a name for the Macro. If desired, enter a shortcut key for it as well. Click OK.

Step 2. Start recording your macro. Perform all the steps you want it to contain. In this example, the macro will create formatted headings for a weekly report. When you're finished, click the Stop Recording button.

Step 3. Check out your new macro. If you entered a shortcut key, press it. Otherwise, go to Tools and select Macros under the Macro option. In the Macros dialog box, select the name of the macro you want to run and click Run. Watch text appear before your very eyes.

—MARIA LANGER

set up a simple relational database

We'll assume for the purposes of this article that you're moderately familiar with FileMaker—at least to the point of having built a database before. If you have built a database, you've probably run into the problem of needless duplication. In a database containing vendor contact information, for example, you could have one record per vendor and type a lot of products into a single vendor record, or you could have one record per product but then end up retyping the same contact info in multiple records.

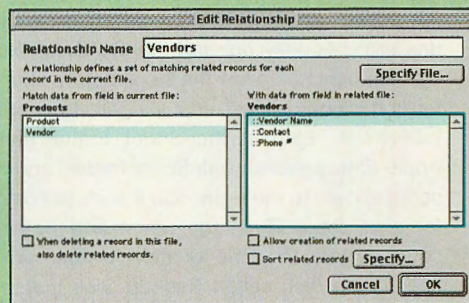
There's a better way. FileMaker is a relational database, and that means you can link several databases together, allowing quick cross-referencing of related information.

Step 1. Create a different database for each logically distinct piece of information. In the example shown here, products are logically distinct from vendors—a single vendor can have many products, and a single product can switch vendors.

Step 2. Create a field in one database that will connect it to another database. For example, create a vendor name field in the products database to connect the latter with the vendor database.

Step 3. Choose Define Relationships from the File menu. In the dialog box, click New to define a new relationship, then select the database to which you wish to link.

Step 4. You should now see a list of the fields in each database. Select the field in each list that contains the same info. For example, if you've got a vendor database with a vendor name field and a product database with a vendor field, you're probably referring to the same piece of information. Once you've picked the appropriate fields, click OK, then Done to dismiss the Define Relationships dialog box.



IN A RELATIONAL DATABASE, you link separate databases through a field they have in common.

That's all—you've created a relational database. In Layout mode, you can add fields to the layout that come from related databases, not just from the one you're using. Best of all, changes you make in one database appear everywhere else—so you won't have to spend ages reaming old and inaccurate data out of your files.—IAN SAMMIS

PRODUCTIVITY

HOW-TO

productivity

go

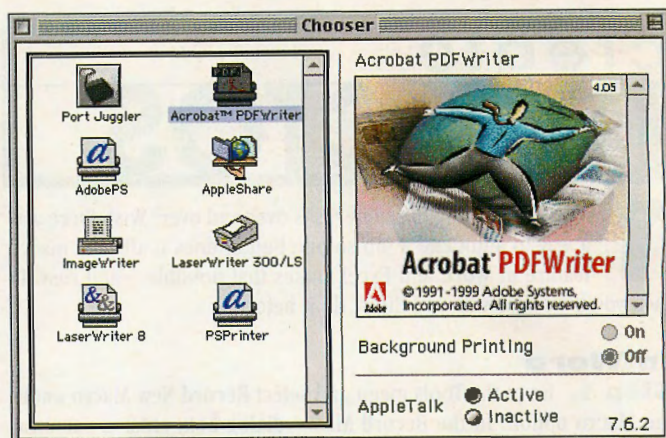
paperless

How often do you create a document, format it until it's picture perfect, print it, and mail it to someone else? Too often! Here's how you can use Adobe Acrobat to share those documents with anyone, and avoid killing a single tree or wasting a speck of toner. Before you begin, you'll need to install Adobe Acrobat. Not just Acrobat Reader—that's for reading Acrobat files, not creating them. To create Acrobat PDF (Portable Document Format) files, you must install the full Acrobat program.

There are several ways to create a PDF using Acrobat. Here's one technique that will work for all of your documents.

Step 1. If you haven't already done so, create a PDFWriter Desktop Printer icon. To do this, go to the Chooser and select the Acrobat PDFWriter icon, then close the Chooser. The PDFWriter icon appears on your desktop. Note that the PDFWriter is now your default printer. If you want to use another printer, select it with the Chooser.

Step 2. Choose the document you want to turn into a PDF file, then drag it onto the PDFWriter icon on your desktop. The program that created the document launches and a Print dialog box appears. The options at the bottom of this dialog box vary from one application to another. Set the options as desired and click OK.



SAVING A FEW TREES is a cinch using Acrobat—simply select the PDFWriter as your “printer.”

Step 3. Turn on the Prompt For Document Info box in the Print dialog box to call up the Acrobat PDFWriter Document Information dialog box. Enter information about the document and click OK.

Step 4. In the Save As dialog box that appears, enter a name and select a destination for the PDF file. Then click Save.

Step 5. Now you have a PDF document. If you turn on the View PDF File option in the Print dialog box, Acrobat Reader launches and displays the document. You can check out your work and send it off for all to see—without wasting a single sheet of paper!—**MARIA LANGER**

build a basic

backup script

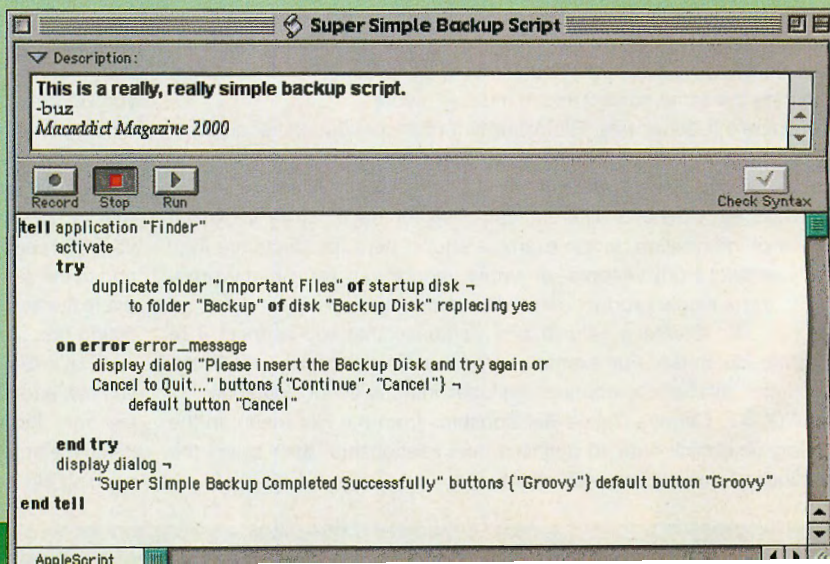
In the wacky world of technology, one word crops up again and again: backup. This word can mean the difference between computing success and disaster. However, by automating your backups using AppleScript and the iDo Script Scheduler, you can leave disaster behind. Follow the steps below, and you'll be on your way to really backing up data—not just talking about it.

Step 1. Launch the Script Editor (usually in Apple Extras in the AppleScript folder) and type the script shown to the right. You'll want to customize it for your setup. Type the name and path of your source folder, then the location for the backup. We have a Zip disk called Backup Disk that we keep loaded in the computer at all times. This is where we back up the Important Files folder. Note that we put a check in there to see if the disk is available—you may want to remove this line. You may also want to remove the dialog box at the end, especially if you want the script to run unattended at night. Also, to make the soft return (↵) symbol, press Shift-Return. Once you have entered the text, save it as a compiled script.

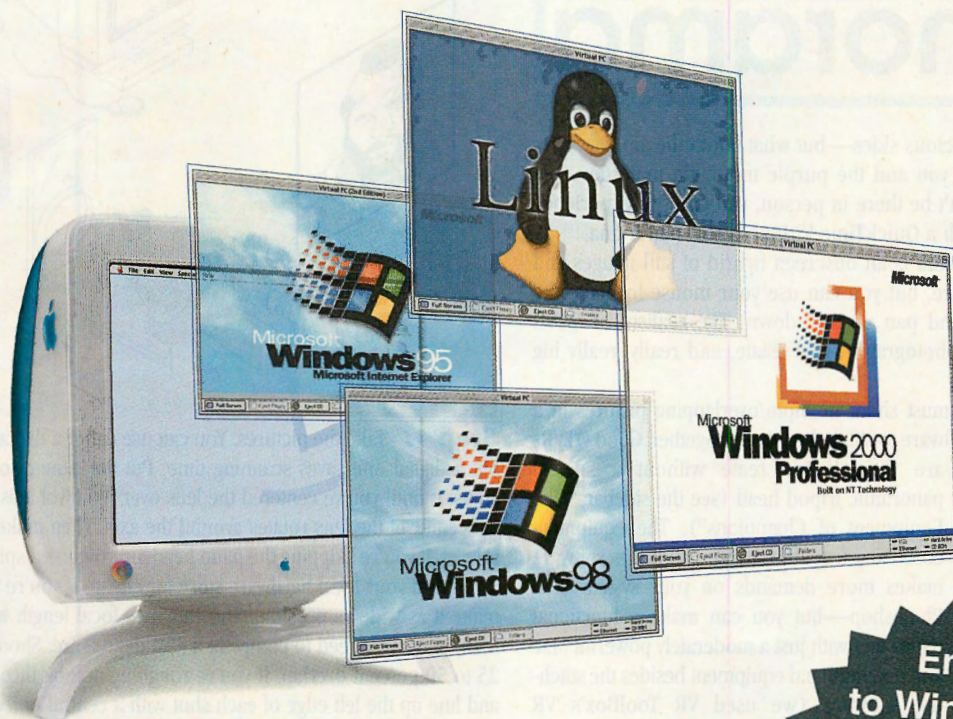
Step 2. The iDo Script Scheduler (<http://www.sophisticated.com>) is a free tool that lets you

schedule when to run any AppleScript. Launch the iDo Script Scheduler Control Panel. Click the New button and choose your backup script. Name it, set a schedule for it, and click OK. Set it to run every night and you've got a regular backup.—**BUZ ZOLLER**

THIS IS HOW your backup script should look when all is said and done.



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Connectix Virtual PC is a software solution that's like having a Pentium chip in your Mac. And, it's available in 5 different versions. Whether you need to run Red Hat Linux, Windows 2000, 98, 95, or PC-DOS on your Mac, Virtual PC makes it easy to get started because the operating system is pre-installed. Bridge the compatibility gap between your Mac and most PCs by using Virtual PC from Connectix.

To buy or for more information, go to www.connectix.com or call 1-800-395-1804



MULTIMEDIA

HOW-TO

multimedia

make a quicktime VR panorama

O beautiful for spacious skies—but what about the amber waves of grain behind you and the purple mountain majesties over there? If you can't be there in person, you can still experience all of nature's splendor with a QuickTime Virtual Reality panorama.

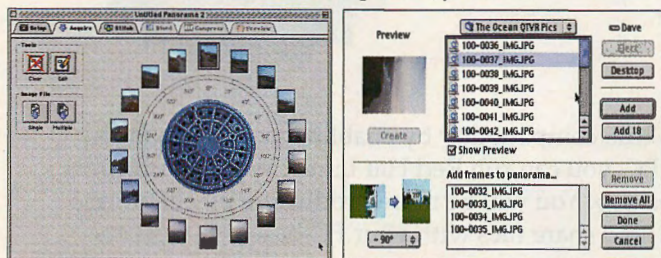
A QuickTime VR panorama is an onscreen hybrid of still images and video. It looks like a picture, but you can use your mouse to make the image spin 360 degrees and pan up and down. The realism of QTVR makes it ideal for nature photography, real estate, and really, really big group shots.

To create a QTVR, you must shoot multiple overlapping pictures in a 360-degree arc, then use software to stitch the images together. Good QTVRs are difficult to create without a special panoramic tripod head (see the sidebar, "The Equipment of Champions"). The equipment costs an arm and a leg, and the software makes more demands on your system than Photoshop—but you can make a functional panorama with just a moderately powerful Mac and no additional equipment besides the stitching software (we used VR ToolBox's VR PanoWorx, \$149.99 SRP, <http://www.vrtoolbox.com/tooldownloadnow.html>).

The steps below depend on a pano head, but if you're the type to use a flathead screwdriver with a Phillips screw, you *can* make it work.



DISCUSS THESE or other Multimedia projects at <http://www.macaddict.com/debate>. **FIND A DEMO of PanoWorx, a QTVR how-to, a demo of MovieWorks, and Beatnik accessories on The Disc.**



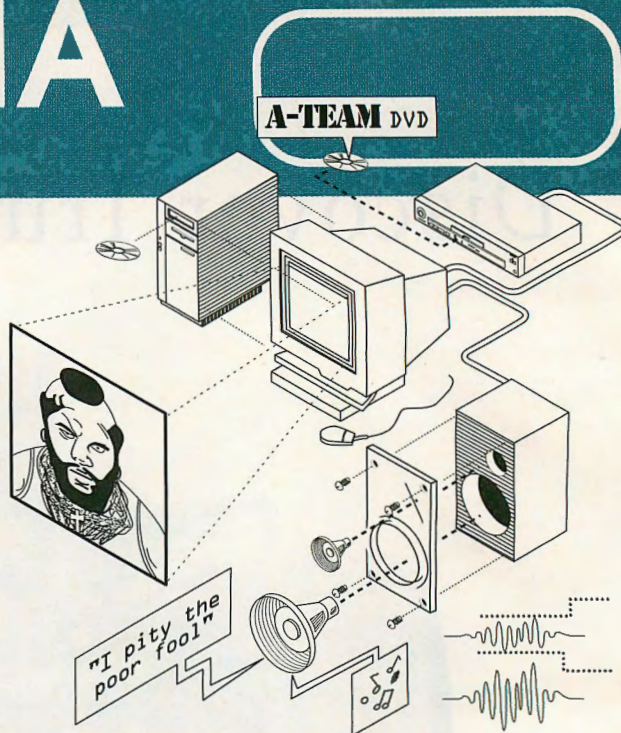
YOU CAN DRAG AND DROP images into the Acquire wheel or import them all at one time with the multiple dialog box (in our case, the Add 18 button).

the equipment of champions

For the best QTVR panorama, you'll want a tripod and a panoramic tripod head. Available from several companies, including Kaidan (<http://www.kaidan.com>) and Bogen (<http://www.bogenphoto.com>), a pano head holds your camera in a portrait orientation and allows the camera lens to rotate around a central axis so the distance from its subject remains constant. A traditional tripod head centers the camera *body* on the axis, not the lens, and this causes distortion.

In addition, a pano head often includes a leveling mechanism. Many pano heads also offer click stops, which make the camera rotate a fixed number of degrees between each shot.

A PANO HEAD COSTS a lot of money—anywhere from \$150 on up—but it sure creates nice panoramas.

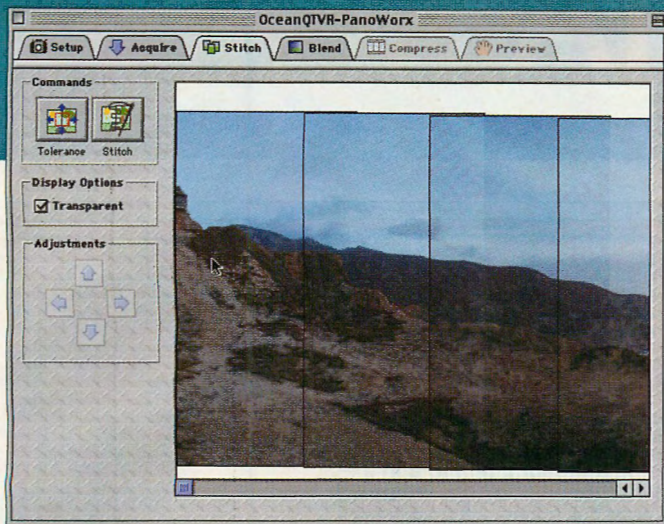


Step 1: Take the pictures. You can use either a digital or a film camera, but a digital one saves scanning time. Put the camera on your tripod and adjust it until you've centered the lens over the pivot axis and the longitudinal center of the lens rotates around the axis. Then make sure the platform is level. If you're skipping the pano head for now, use a spirit level, which you can buy at your local hardware store for cheap. If you're using a zoom lens, make it as wide as possible. The camera's focal length will determine how many shots you need to complete a 360-degree arc. Shoot your images with 25 to 50 percent overlap. If you're roughing it, look through the viewfinder and line up the left edge of each shot with a central object in the preceding shots. The more overlap you use, the better chance the software has of matching identical pixels in adjacent images (that's how it stitches them together).

Step 2: Import the images. A digital camera names your images with consecutive numbers, which keeps them in the proper order. If you're scanning, name them something like pano01, pano02, and so on. You can reduce the resolution and compress the images before you stitch, or you can let the stitching software do it; if you wait to process the images, the stitching application will run more slowly.

Step 3: Open the VR PanoWorx software. In the Setup window, tell the application how many images you're throwing at it, their size, and the focal length of the camera lens. If you're using a digital camera, you'll need to determine the equivalent 35mm focal length; look through the camera manual to find this information.





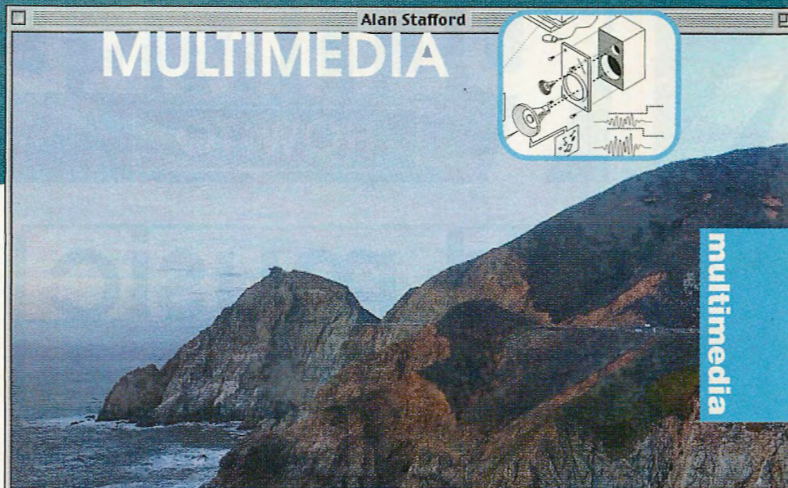
UNDER THE STITCH TAB, check for proper overlap by looking at edges. If they don't line up, nudge them as close as you can to the proper position.

Step 4: Under the Acquire tab, click Multiple and use the One-Step Image Import command—you'll need to rotate images to their proper orientation (either plus or minus 90 degrees) before you import them. You can also drag images one by one onto the wheel.

Step 5: Under the Stitch tab, adjust the tolerance higher for rough stitches (appropriate for images taken without a pano head). Click Stitch and go get a cup of coffee. After the application has finished stitching, look for incorrect matches. Check the Transparent option and use your mouse to adjust any errors manually.

Step 6: Under the Blend tab, increase the Blend slider if the image exposure varies too much. You can also sharpen the final QTVR if you're using fuzzy source images. Blend your images and click the Edit button for last-minute photo touchups.

Step 7: Under the Compress tab, choose a compression algorithm (a



HERE'S THE FINAL spin-doctored panorama.

codec). Use a codec appropriate for still images, not video; Photo-JPEG works best. Choose a relatively low-quality setting to keep the file size down, but stick with 24-bit color (it's a picture, after all). The Dicing settings specify the number of tiles that represent an area of the image. A low number (1 by 24) may cause the finished panorama to spin less smoothly on modest systems, but a higher number (such as 4 by 48) increases the file size. Make it fit your target audience's systems. The Default Viewing Angles option sets the appearance of your panorama when viewers open it and limits how far they can zoom in or out. Set this according to your taste: a zero-degree Initial opens the panorama to the first frame you imported, a zero-degree Tilt shows the panorama level with the horizon, and a zero-degree Zoom shows the widest angle possible. When you're done tweaking the settings, compress your panorama.

Step 8: Take the panorama for a test spin by going to the Preview option. If you see problems, return to one of the previous panes to fix it. PanoWorx gives you an anticipated file size at the lower left, so if it's too big, change the codec and/or the quality level. When the results satisfy you, choose Export Movie to create the finished product. —ALAN STAFFORD

glue a movie from individual images

You're about to render your first 3D animated movie as a sequence of individual image files. Or you're planning to stick together a bunch of assorted images for a Web animation. To glue all those files together into a QuickTime movie, you need either Apple's QuickTime Pro 4 (\$29.99, <http://www.apple.com/quicktime>) or Thorsten Lemke's shareware utility GraphicConverter (\$35, <http://www.lemkesoft.com>). Both can do the job, but even if you have QuickTime Pro, we recommend getting your hands on GraphicConverter, because it does a lot more than simply glue pictures together.

Step 1. Make sure all your images are the same file type—all PICs or JPEGs or GIFs, for instance. You can't glue together images of different file types without converting them all to the same format. Also, the images should all be the same size, with the same aspect ratio (length by width). GraphicConverter's batch conversion features can deal with these and other factors as the movie compiles. Also, put all the files into one folder.

Step 2. Number the files consecutively: 01.pct for the first frame, 02.pct for the second, and so on. A name like 01mymovie.pct will work as well. Make sure the sequential number is the only number in the file

WE COMPILED
the final movie
from a total of
90 individual
image files.



name (shotwotest01.pct, not shot2test01.pct). Also make sure all the file names contain the same number of numerals (01mymovie.pct, not 1mymovie.pct, which won't work after frame 9). Most 3D animation programs number frames sequentially during rendering. GraphicConverter can also add numbers to the names of a file sequence.

Step 3. In QuickTime Pro 4, choose Open Image Sequence from the File menu and navigate to the first numbered frame. QuickTime asks how many frames per second you want, then compiles the movie. In GraphicConverter, bring up and select the numbered images in the left-hand file box, specify MooV—QuickTime Movie as the destination file format, choose Options to set the number of frames per second, and click the Convert button. —STEVE ANZOVIN

MULTIMEDIA

HOW-TO

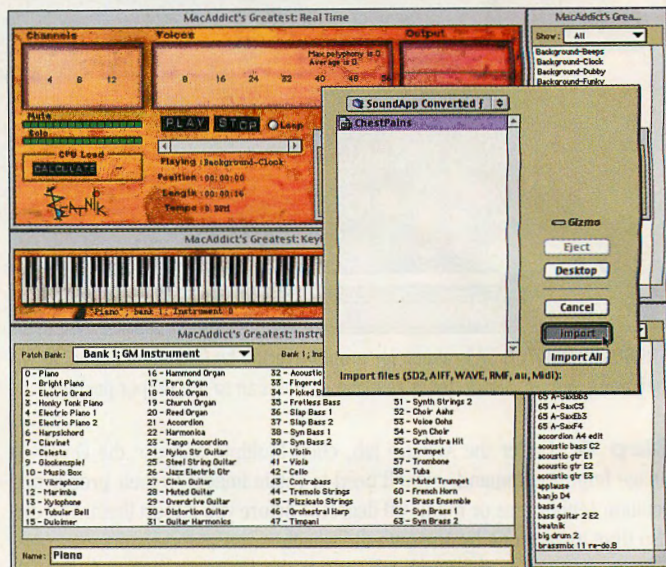
multimedia

add music to your web site

If you're looking to add music and sound to your Web site without subjecting the modem-connected to the sluggish lag time that streaming audio and MP3s create, Beatnik is the perfect solution. Beatnik (<http://www.beatnik.com>) allows you to convert high-quality music and sound into tiny RMF (Rich Music Format) files you can embed into Web pages, then play them back instantly whenever you mouse over or click a hot spot. To do this, you'll need Beatnik ActionSet, Beatnik RMF Sampler (or Beatnik Editor if you want to convert your own files to RMF), and Beatnik Player (all free via the Beatnik site), along with Dreamweaver (\$299, <http://www.macromedia.com>—there are tools available for hand-coders, but it's easiest with Dreamweaver). Here we created a simple Web site and made samples of music play whenever the cursor rolled over an artist's image.

Step 1: Use Beatnik Editor to convert a few AIFF sound files into RMF format. You can also try out the RMF sampler, which will get you started more quickly.

Step 2: To embed an RMF file into a Web page, make sure you've installed the Beatnik ActionSet into Dreamweaver. Open a new Dreamweaver document and insert an image to serve as the clickable hot spot. Click the Behaviors button from Dreamweaver's Launcher palette to open up the Behaviors window. In the lower left corner of your HTML page, click the word body, then click the plus sign (+) in the Behaviors window. Select Beatnik ActionSet Setup from the menu. You'll get a setup screen asking you to locate two files—beatnik-actionset.js and stub.rm. Locate these files to connect their paths, then click OK. You're ready to load your sound file.



PULL THE OL' switcharoo on your audio files by converting them to RMF with Beatnik Editor.

Step 3: To add an RMF file, click your image, then click the plus sign in the Behaviors window again. From the hierarchical menu, select Beatnik, then Music File, and finally Beatnik Action—Play Music File. Click the button next to File URL, select your RMF file from the dialog box, and click OK. Press F12 to launch it. Now you can hear your creation by mousing over the picture in your browser.

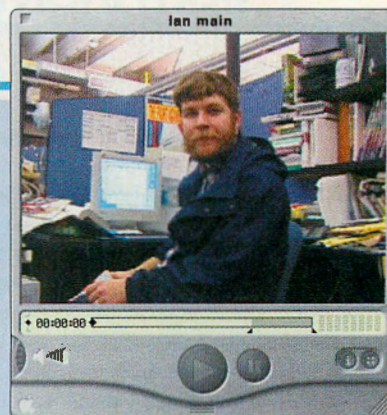
Beatnik also offers a number of sounds you can access by clicking the plus sign in Behaviors, then selecting Beatnik, Groovoid, and Beatnik Action—Play Groovoid. Click Groovoid Name to choose from dozens of sounds, then select one and click OK. Press F12 to launch it—and mouse away to hear the goods.—KRIS FONG

make quick edits with quicktime

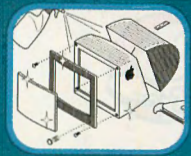
Apple gave makers of home movies a swell editing tool with iMovie, but those of us who've spent a little time with our old buddy QuickTime know that for basic edits and trims, you don't need a full-blown, nonlinear video application. QuickTime Pro (\$29.99, <http://www.apple.com/quicktime>) features some rudimentary editing tools built right into its MoviePlayer app. Take a look at two simple editing tasks we did in a few seconds with QuickTime alone.

- To trim video clips in QuickTime Pro, open your QuickTime movie in MoviePlayer and adjust the small markers on the timeline so the grayed-out area includes the part you want to delete (generally either the beginning or the end of the movie). Then press the Delete key. You've just trimmed away some excess movie.
- These markers also come in handy when you want to make a fast edit. Start by opening two clips you wish to integrate. In the first clip,

TO TRIM A QUICKTIME CLIP, just select what you don't want and press Delete.



set the markers so the grayed-out area spans the part of the movie you wish to insert into the second movie. In the second movie, set the main Play marker (the one that shows your location in a movie) to the point where you want to insert the new clip. To place it at the beginning of the movie, simply put the marker at the start. To insert it after the movie, slide the marker to the end. To complete the edit, simply drag the first clip onto the second.—ROBERT CAPPS



make an interactive movie

Despite what some moronic PC columnists may tell you, desktop movies rock harder than a New Years' Eve 1978 Kiss concert in Detroit. If you're among the brave who have already spent time compiling your own drama, documentary, or music video, perhaps it's time to take your movie-making to the next level: interactivity.

Programs such as Macromedia's Flash and Director will turn your simple home movie into a freakin' video game if you want them to, but that hardly seems in the budget-minded, anyone-can-do-it spirit. However, with a great (if little-known) program called MovieWorks from Interactive Solutions (<http://www.movieworks.com>), you can quickly compile a choose-your-own-adventure movie. MovieWorks costs only \$99 (\$79 if you download it straight from the Web). Unfortunately, the program has its limitations and requires its own (free from the site) special Player app for viewing—but it's about as simple and inexpensive as interactivity gets. —ROBERT CAPPS

THE FOUR FACES OF JENMO... In our interactive movie, viewers select the emotion they want to see Jenmo act out.



FIND OUR INTERACTIVE Jenmo movie, MovieWorks Player, and a MovieWorks demo on The Disc.

Step 1. Capture Video

Digitize all the clips you will need for your interactive movie—in this case, an intro clip and four branching story clips. MovieWorks comes complete with its own video capture app, but you can use almost any video capture app. For this project, it's best to capture video at 320 by 240 resolution and compress it with either Sorenson or Cinepak.

Step 2. Start a New Project

Launch MovieWorks and click New Project. The program asks you to name the first Scene—leave this as Scene-1. The project window opens.

Step 3. Set a Background

Set a background for your new project. You can either build a picture to use as a background in MovieWorks' limited Paint program, or choose an image you already have. At the bottom of MovieWorks' project window you see a Scene Navigation menu that can toggle between scenes. From this menu, choose Background, then import your image from the Object menu.

Step 4. Add Scenes

You need to create a scene for every branch of your story line. You also want an end scene to give the viewer a chance to play the movie again. To add scenes, select Scene-1 from the Scene Navigation menu, then select New from the Scene menu.

Step 5. Add Buttons

Next, add buttons to give the movie its interactive component. You can either make them in MovieWorks' paint application (just select New Button from the Object menu), or import buttons you've made in another program, such as Photoshop. Import your buttons from the Object menu.

Step 6. Build Your First Scene

Import your intro movie and all your buttons into Scene-1. Set each button to appear throughout the entire scene by selecting that option in the button's Attributes field (from the Object menu). You should also set a link for each button so it launches a new scene when pressed. Select Links from the Object menu.

Step 7. Build More Scenes

Now build the other scenes. Select a scene from the Scene Navigation menu and import the corresponding movie. You should also link each scene to the ending scene. To do this, select the scene and choose Links from the Scene menu.

Step 8. Build the Last Scene

To give your viewers a chance to start over, create a final scene containing a button which will begin the movie again. Link this button to the first scene.

Step 9. Build the Movie

When you are finished, you can test your movie by going to the first scene and selecting Play from the MovieWorks Controller. If your movie works, select Make Player from the File menu, and MovieWorks compiles your movie. To watch your interactive movie, viewers need to have MovieWorks' free Player application.



reviews

Until they make fatherboards, here's what's available for Dad this month.

2000 PowerBook G3

HARDWARE

COMPANY: Apple Computer

CONTACT: 800-692-7753 or 408-996-1010, <http://www.apple.com>

PRICE: \$3,499 (SRP)

SPECIFICATIONS: 500MHz G3 processor, 128MB of memory, 56-kbps modem, 12GB of disk storage, two FireWire ports, two USB ports, 14.1-inch display at 1024 by 768, Rage 128 graphics card with 8MB VRAM, AirPort capabilities, 10/100Base-T Ethernet, video out port, DVD-ROM drive

Just when you thought the PowerBook couldn't get any better, it did. The 2000 model of the PowerBook G3 keeps the best features of the previous incarnation (chic case, gorgeous display, and easy-access innards) and adds some real punch—including FireWire, a 100MHz system bus, AirPort capabilities, a killer graphics subsystem, and a large, fast hard drive. All these features weigh in at about six pounds. This is one beautiful laptop.

The differences between this year's and last year's PowerBook models lie mostly beneath the surface. Apple finally added FireWire to the PowerBook creating the first laptop to ship with it. "In with the new" means "out with the old," and Apple chose to do away with SCSI. You can still use the new PowerBook in disk mode to transfer files to your desktop machine—the only difference with the new 'Book is that it's done through

A VISION IN BLACK, the new PowerBook for 2000 is the best way to go portable. It slices, it dices, it even plays *Unreal Tournament*—acceptably, anyway.

FireWire (see "How to Use Target Disk Mode," next page). FireWire digital video captures went smoothly, and video editing with Final Cut Pro was a joy. Apple has noted a problem getting this to work on some configurations, but they expect to fix it with a software update.

To boost performance, this 'Book sports a new AGP 2X graphics subsystem based on the ATI RAGE Mobility 128 chip—a quantum leap above previous PowerBook

graphics systems. With this setup, *Unreal Tournament* plays acceptably, delivering sustained frames in the mid-20s with average graphics settings. With 8MB of VRAM, the on-board graphics work well for non-gaming uses, too. This PowerBook is also able to drive a second monitor through its monitor-out port in



PHOTOGRAPHS BY AARON LAUER



FREAKIN' AWESOME
The most valuable products, the coolest gizmos.



SPIFFY
A solid offering. Overall a good investment.



YEAH, WHATEVER
A few good features, but generally a waste of time and money.



BLECH!
We hate to even blotch our pages with the thing.



WE CAN TAKE IT—tell us what you really think at <http://www.macaddict.com/debate>.

How to Use Target Disk Mode

To use your PowerBook as a FireWire drive in Target Disk Mode, here's all you need to do:

- 1 Connect the unpowered PowerBook's FireWire port to the FireWire port on another Macintosh. Make sure that there are no other FireWire devices connected. (If you run into problems, you may have to use a crossover Ethernet cable to connect the two together.)
- 2 Start up your PowerBook and hold the T key down. The FireWire symbol will appear on the PowerBook's display.
- 3 Your PowerBook will show up on the desktop of the Mac to which it's connected, and it will behave like any other hard drive. To disconnect, just drag the PowerBook's hard drive icon into the trash and push the 'Book's power key to shut it down.

either second-monitor or mirror mode, both of which worked without a hitch.

But Apple didn't stop 'Book-boosting at the graphics subsystem. The system bus now runs at 100MHz, making for some breakneck processing. Combine that with a 500MHz G3 processor and an Ultra ATA/66 hard drive, and the new PowerBook can cruise at sustained speeds previously found only in high-end desktop systems. AirPort is also now a part of the new PowerBook, and by installing an AirPort card (a simple procedure involving pulling the keyboard off), you can experience the joy of surfing the airwaves.

Just so you won't accuse us of being pro-Apple Pollyannas, we'll share a few quibbles we had with the new 'Book on the block. The keyboard feels just a bit flimsy, probably

because the key caps, switches, and circuit board underneath are about 1/4-inch thick in total, but that's been a problem since the fold-out keyboard was introduced with last year's model. The PC Card implementation also feels a bit cheap—gone is the auto-eject card slot. Instead, there's a lock-and-release lever that pushes the card out. It feels a lot like a PC floppy eject button.

Still, this latest edition of the PowerBook G3 is a real winner. With its high speed, dual monitor support, and the latest technologies (FireWire and AirPort), the PowerBook G3 is good enough to replace a desktop system for all but the most demanding users—even gamers. The long battery life, DVD capabilities, and glowing Apple on the back of the case are just bonuses. —David Reynolds

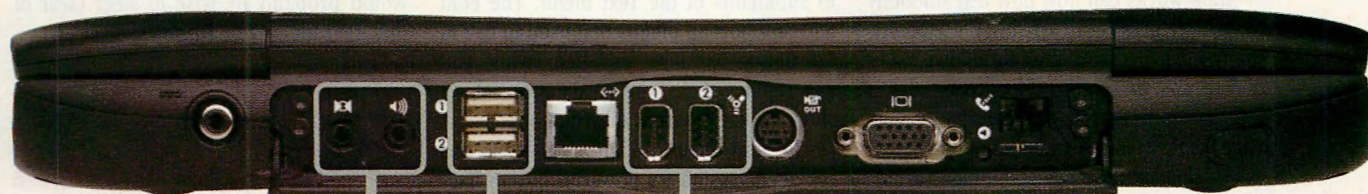
BENCH-PRESSING

As usual, we put the new PowerBook through Norton Utilities System Info benchmark suite to get an idea of how well it stacks up against last year's top-of-the-line 'Book. Here's what we found (longer is better):

POWERBOOK G3 2000	
400MHZ POWERBOOK G3	
System	1114
	899
CPU	1269
	1044
Video	775
	679
Disk	663
	391
FPU	1167
	935

GOOD NEWS: Great speed. Solid construction. FireWire works like a charm. Beautiful display. AirPort support built in.

BAD NEWS: SCSI's gone—boo hoo.



Audio Ports

Audio in, audio out. The ports for getting sound in and out of your PowerBook haven't changed much in a long, long time—and that's oddly comforting.

USB Ports

The twin stacked USB ports are unfortunately close to the audio out port. Try plugging in a set of speakers with a bent plug—you either impose on the mike or the USB ports.

FireWire Twin Ports

Where's my SCSI? It's gone, my pretty! It's been replaced with these funny-looking six-pin ports that are faster and more reliable than SCSI in almost all of its flavors.

in review

HARDWARE

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CANOSCAN FB 630UI (PRODUCT CODE: 0604) p. 74
PRO-MEDIA 3025 (PRODUCT CODE: 0605) p. 75
HP 1220C (PRODUCT CODE: 0603) p. 76

THAT'S INFOTAINMENT!

STEPHEN KING'S F13 (PRODUCT CODE: 0612) p. 80
MIDNIGHT PLAY (PRODUCT CODE: 0613) p. 80
AMERICAN CIVIL WAR (PRODUCT CODE: 0614) p. 80

MULTIMEDIA

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PRODUCTIVITY

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AppleWorks 6

PRODUCTIVITY

COMPANY: Apple Computer

CONTACT: 800-692-7753, <http://www.apple.com>

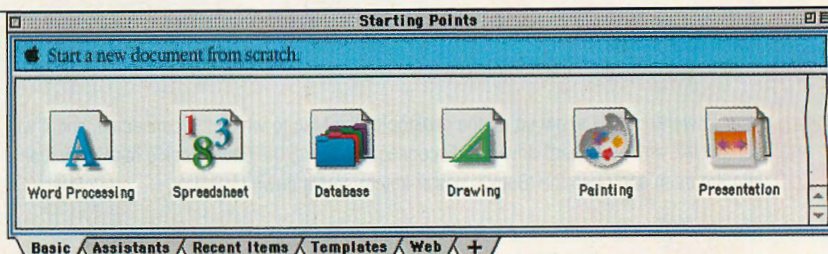
PRICE: \$79 (SRP)

REQUIREMENTS: PowerPC processor, Mac OS 8.1 or later, 24MB of RAM, 41MB of free hard disk space

AppleWorks holds a special place in the heart of the Mac community. Bundled with every iMac and iBook, it's the first real productivity application many of us ever used. Unfortunately, AppleWorks 6 is very much a mixed bag. While Apple has added some useful new features, it can't seem to break its recently acquired habit of making counterproductive interface changes.

The most obvious new feature is the Presentation module, which replaces version 5's wildly outdated Communication module. It allows users to create reasonable presentations with transitions, sound effects, and QuickTime movies. However, you can only size presentations up to 640 by 480—large enough for a video presentation, but clunky when displayed on higher-resolution screens or LCD projectors.

AppleWorks can now flow text smoothly around pictures, even irregular vector art. The word processing module allows users to date and timestamp documents, and a new table tool lets you slice cells freely. This makes table creation and editing much easier. Version 6 addresses some basic archi-



DON'T DO US ANY FAVORS, REALLY. This new floating palette prevents you from choosing a document type with a keyboard command.

ture issues such as strengthening AppleScript support and Carbonizing the whole application. Under OS X, AppleWorks will run as a native program.

These features would have made for a solid upgrade if Apple hadn't added pointless interface changes (as with QuickTime 4 player and Sherlock II) that actually weaken the program's functionality. A floating Starting Points palette has replaced the familiar dialog box that used to appear when you created a new document. Now there's no way to create a custom new document type from the keyboard. The word processing module has relegated the Font, Size, and Style menus to submenus of the Text menu. The Font and Size pop-up menus that used to live in the button bar have vanished (while you can replace them, the new buttons don't show the current font information).

To add insult to injury, Apple has replaced version 5's powerful button bars

with prettier but less useful ones. The new button bars come in two sizes—huge and unimaginably immense—and the application no longer supports the selectable button bars of version 5. In addition, this version doesn't address one of AppleWorks 5's more annoying bugs—labels in outline mode still cheerfully march off the left side of the page.

The presentation mode and the text-wrapping features are welcome additions to a solid program. The altered and generally worsened user interface, however, wastes more time than the new features save. Unless you really want its text-wrapping or presentation features, you would probably be wise to steer clear of this upgrade. —Ian Sammis

GOOD NEWS: Presentation module.

Excellent text wrapping.

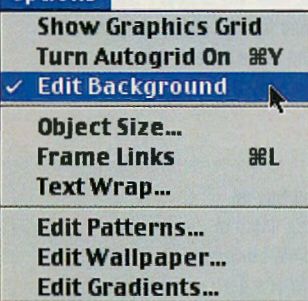
BAD NEWS: Weak interface. Some old bugs persist.



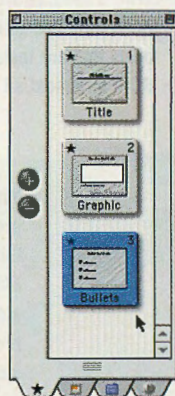
Make a Professional Presentation

AppleWorks 6's Presentation module isn't as full-featured as PowerPoint, but it's useful for many presentations.

Options

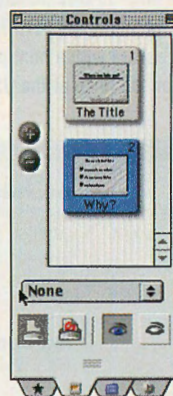


1 Create a new document and choose Edit Background under Options. Whatever you draw appears in every slide's background. Then select Edit Background again.



Under Arrange, select Lock to avoid inadvertently moving objects.

2 Click the star tab in the Controls palette to create master slides, which are slide templates. The plus and minus buttons create and delete master slides.



and modify the elements as you wish. You're all set.

3 Now you're ready to create a new slide. Click the star tab and select the master slide you want. Click the slide tab, then click the plus button



choose a type of transition from the menu under the slide images.

4 Overly gaudy effects can be distracting, but you can add flair to your show with a cool transition. Select the slide that will appear at the end of the transition. Then

Spring into Summer with VST



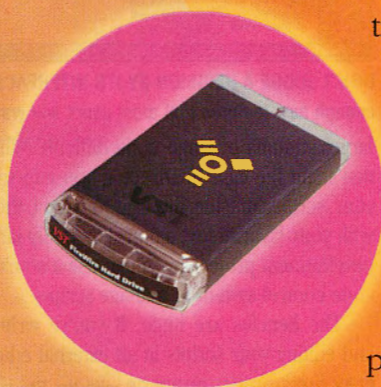
With VST's line of portable USB, FireWire® (IEEE 1394) and laptop peripherals, you can increase your productivity as you spend more time on the road this Summer.

VST's portable USB Hard Drives and Floppy Disk Drives provide a convenient way for you to back-up your hard drive or transfer files to and from your USB-

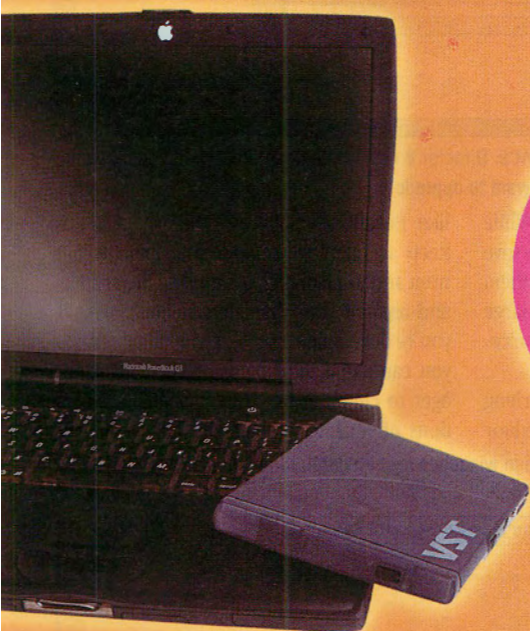
equipped computer. For those looking for an even faster storage solution, the VST FireWire peripherals are the perfect match. From the ultra-slim

Hard Drives to the convenient FireWire Zip®

Drives, capturing digital files or transferring large amounts of data is a breeze.



Apple PowerBook® users can expand their mobility to new heights with VST's complete line of Expansion Bay storage devices and power peripherals. Whether you're looking for a Zip Drive, SuperDisk® Drive, Hard Drive or even an Auto Adapter, VST has the PowerBook solutions you're looking for.



So visit **www.vsttech.com** to see these and other exciting product offerings designed with your productivity, convenience and mobility in mind. And enjoy springing into Summer this year.



VST
www.vsttech.com

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reviews

reviews

Director 8 Shockwave Studio

MULTIMEDIA

COMPANY: Macromedia

CONTACT: 800-326-2128 or 415-863-4409,

<http://www.macromedia.com>

PRICE: \$999 (SRP), \$969 (street), \$399

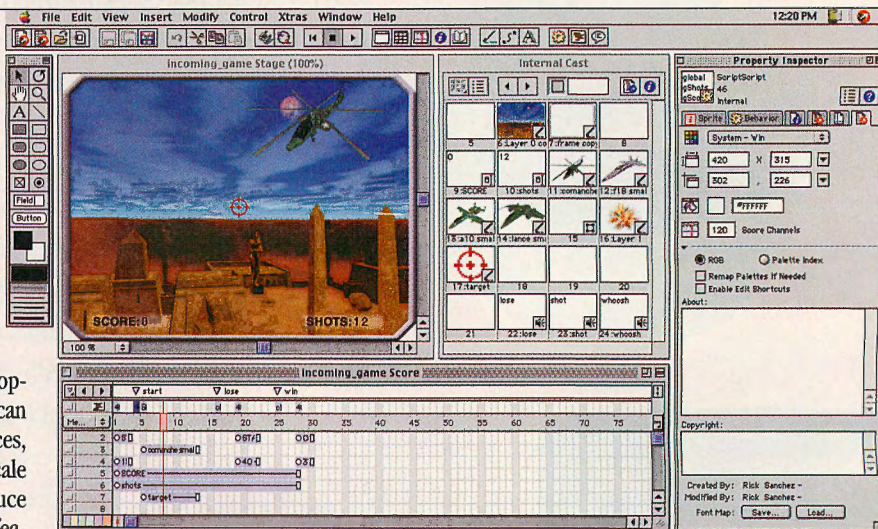
(Director 7 upgrade)

REQUIREMENTS: PowerPC 180MHz or faster; Mac OS 8.1 or later; 32MB of RAM, 100MB of free hard disk space; CD-ROM drive; 800 by 600 resolution, 8-bit color monitor or better

The mother of all multimedia development tools, Macromedia's Director 8 can create CD-ROMs, DVD movie interfaces, Internet Shockwave games, and large-scale chat rooms. Director 8 doesn't introduce anything as earth shattering as 7's list of features—but this version adds enough to make it a worthy upgrade for heavy users, while it streamlines the development process in an app that's threatening to become bloatware.

Director 8 packs a lot of power in a reasonably easy-to-use package. New users who don't want to learn Lingo, Director's programming language, can rely on a large selection of drag-and-drop, preprogrammed actions called Behaviors to control the movement of graphics and the project's user interactivity. Tweening and onion skinning are very simple tasks with Director 8's suite of animation controls. If you are a seasoned Java or C++ developer, however, you will pick up Lingo fairly quickly and gain near-total control over every element in a project.

Macromedia put much effort into streamlining its flagship application and addressing users' longest-standing complaint: the inability to open more than one script window at a time. This constraint made working with



DON'T JUDGE A REVISION BY ITS INTERFACE. Director 8 may not look different, but it packs enough new features that most users will want to upgrade.

large amounts of Lingo code difficult. While that's still the case in Director, you can save your scripts outside the app and edit them with your favorite text editor. For really large development projects, you can use a source-code control system to manage scripts.

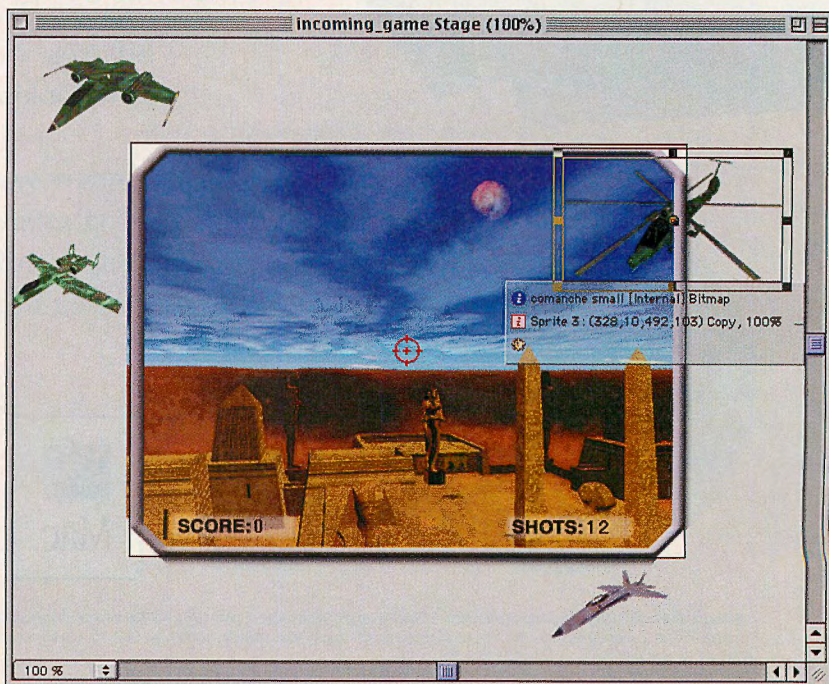
The benefits are huge. If you're writing and editing your scripts in an external editor

like BareBones Software's BBEdit, you can keep as many script windows open as you want and use BBEdit's comprehensive search-and-replace and formatting commands. If you're developing a project with other coders, you can use a third-party source-code manager to check in or check out different sections of your scripts and do version control

PLAY OUTSIDE THE BORDERS with the Stage window's new Pasteboard functionality, which lets you work outside the Playback area.

MAKE IT MULTIUSER

Shockwave Multiuser Server 2 is Macromedia's answer to Web-based community building. Director 8 includes a version of the server that allows up to 1,000 concurrent users to connect to an application. To get the most out of the Multiuser Server 2, Macromedia has created a list of Behaviors that facilitate building multiple-user environments. Macromedia's Web site says you can build a chat application in five minutes with the new behaviors. It took us quite a bit longer, but we built a chat application that worked—a task we would not even have attempted with Director 7.



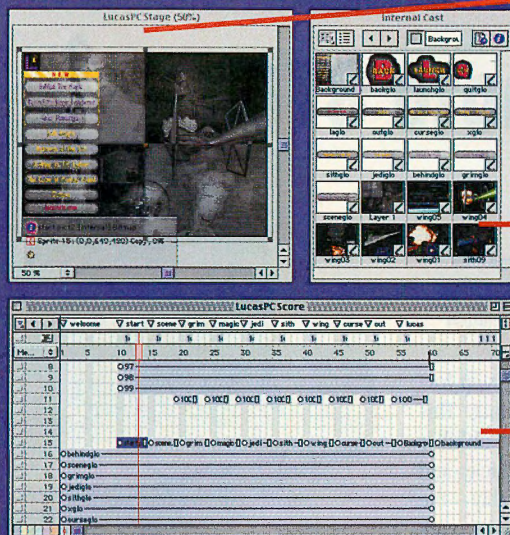
for your work. The external scripts move Director's Lingo development environment a few steps up the evolutionary ladder—bringing it much closer to more-standard programming languages like C++ or Java.

The next most useful feature is the new Property Inspector, which merges a bunch of Director Inspectors into a single, very useful window. The Inspector lets you access properties such as x and y coordinates or Photoshop-style sprite inks, global movie properties, and stage properties. Having all your property-inspecting tools in one spot saves a tremendous amount of screen real estate. The Property Inspector conveniently allows you to select multiple elements and edit a property for all of them at once.

Macromedia has also updated the Cast window. The Cast is a database of every element in a Director project—bitmapped graphics, QuickTime movies, sound files, text, and so on (see "Drama Queen," right). In the past, the Cast had only one view—a huge list of thumbnails. This is great if you're working exclusively with graphics, but generic script thumbnails won't do much good if you're seeking a particular script. Now you can switch between the traditional Thumbnail view and a new List view, which works like a finder window—sort the list by name, file type, size, or modification date, or other options. You can add comments to Cast members and sort based on those remarks.

Seasoned users would probably pay the upgrade price for just these three features,

DRAMA QUEEN



As the name suggests, Director's interface uses a theatrical metaphor. The windows you will use most often—the Stage, the Cast, and the Score—rely heavily on preconceived notions of what these names imply.

The Stage contains all the action. In this area, the elements of your project come together in front of the user. While you're working, you can move elements around the Stage, arranging them and giving them directions for movement and appearance.

The Cast Window is a lot like a green room. Here you store every element you want to incorporate in your movie. This can include bitmapped graphics, sound files, text, HTML, vector graphics, and QuickTime movies.

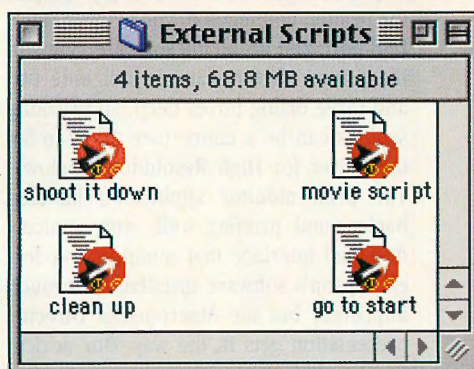
The Score is where you bring the pieces of your project together. You can use the frames between the beginning and end of your production to segment your movie. Also use the Score to manipulate items placed on the Stage—determining what scripts each element will use, setting the pace, and so on.

but Director 8 also has some handy graphics additions, including guides, Locked Sprites, Stage zooming, and a Distribute command.

Anyone who's used Adobe Photoshop will find guides familiar. You can set up blue line guides horizontally and vertically to align graphics on the Stage or to assist in laying out an animation. Director 8 adds a new Pasteboard view of the Stage, called the Playback window. Also for the first time, you can place Sprites (a graphic, a piece of text, or any other media element) outside the Stage's physical border. Say you're making a Shockwave game 160 by 160 pixels large. At playback, the user only sees that 160-by-160-pixel space, but you can expand the Stage window as much as you like and position elements in the border for later use. You can't accidentally move Locked Sprites while you're working. Stage zooming allows you to magnify the Stage up to 400 percent. Finally, you can apply JPEG compression to bitmaps file by file or set a global compression level.

Shockwave, the Internet format for Director projects, has improved as well. Director 8 is the first version to support two types of scaling playback windows. You can expand the entire window proportionally, or you can stretch it without regard for the aspect ratio. A new Publish command

WORKS GREAT, LESS FILLING. The new Property Inspector window merges many of Director's palettes into one compact area where you can set everything from the background color of your movie to a sprite's coordinates.

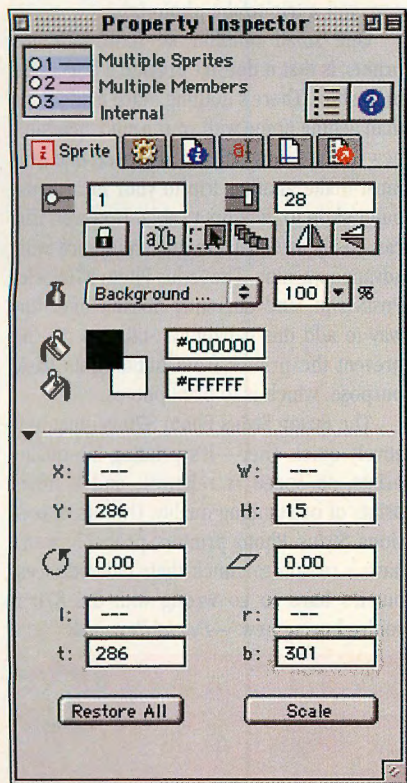


SAVE YOUR SCRIPTS OUTSIDE DIRECTOR as text files so you can edit them in your favorite text editor.

makes it much easier to output Shockwave movies, consolidating many Director 7 dialog boxes and functions.

No single feature of Director 8 has that "I *must* upgrade" appeal. But if you take a look at the whole application, Macromedia has done an excellent job of making Director a better environment. If you use the program all the time, you'll find it worth your while to take the plunge and upgrade. If these new features don't wow you and you're a casual user, then upgrading isn't necessary. First-time users, however, are getting the best version yet of this powerful multimedia tool.—Rick Sanchez

GOOD NEWS: Improved workflow. External script editing. Pasteboard Stage view. **BAD NEWS:** You can only open one script internally at a time. Too many windows.





Stylus Photo 870

HARDWARE

COMPANY: Epson

CONTACT: 800-873-7766, <http://www.epson.com>

PRICE: \$299 (street)

REQUIREMENTS: USB-equipped Power Macintosh

The Stylus Photo 870 is a true step forward in desktop photo printing. This latest addition to Epson's line of killer inkjet photo printers is quiet, quick, and truly comparable to photo lab quality—the prints are even light-fast for up to 15 years with the new Epson ink and paper. And at \$299, the Epson Stylus 870 delivers a lot of bang for the buck.

Setup and installation was easy, thanks in part to the USB connection. Just plug in the printer, connect it to your Power Mac's USB port, and install the software. Some of the printer driver features still hide two and three dialog boxes deep, so tweaking settings can be a chore (see "How to Set the Driver for High Resolution," below). The print monitor application handled background printing well, with a nicely designed interface that monitors ink levels. Epson's software installation is much improved, but the Macromedia Director presentation gets in the way. Our advice: Go straight to the driver software installer



PHOTOGRAPH BY AARON LAUER

IT'S FOTOMAT IN A BOX. Packaged in a familiar form factor, the Epson Stylus Photo 870 can make great photos for small cash.

buried a few levels deep on the CD, and launch it directly.

Most folks would do a double-take at the sight of the 870's prints, especially on glossy inkjet film. The 870 faithfully reproduced even the most vibrant colors with very little dot pattern visible. Prints offered pitch-black blacks and sharp edges, and we could barely detect the dot patterns without a loupe. Cleaning the printheads and correcting the printer settings took care of what little banding we experienced.

Two features make the Stylus Photo 870 a great buy: its network capabilities and the Digital PhotoLab Starter Kit. Set up the 870 as a shared printer on your machine, and others on the same network can print to it.

The Digital PhotoLab Starter Kit, which comes with the 870, is a four-inch-wide roll of photo-quality glossy inkjet paper that feeds into the printer from a roll holder (also included). You can print edge to edge on this paper—all you have to do is cut the prints apart. The Film Factory application that ships with the printer handles all of this, but reminds us of a Windows application: clunky and counterintuitive. Once set up properly, though, the software does a fine job of handling multiple prints and may save you a trip to the photo lab.

One small quibble we have with this printer is that it doesn't provide a USB cable in the box. There's nothing more maddening than getting home with your brand-spankin'-new techno toy only to discover that you must make another trip to your local computer shop to pick up a cable. However, you can easily avoid this minor annoyance with advance warning. The Stylus Photo 870 lacks PostScript, and currently doesn't offer any way to add this capability. Still, this doesn't prevent the printer from fulfilling its basic purpose, which is to print photos.

The Epson Stylus Photo 870 is quiet, relatively quick (hey—it's printing lab-quality prints, so speed is relative), and it offers prints of outstanding quality. Owners of previous Stylus Photo printers probably won't have a reason to chuck their older devices, but it's hard to go wrong with the 870 if you're buying new.—David Reynolds

HOW TO SET THE DRIVER FOR HIGH RESOLUTION

To get the best possible prints from your Stylus Photo 870, here's how you should set up the print driver. Select Page Setup, click the Options button in the next dialog box, and then select the Custom mode and click Advanced in the next dialog box to get to the starting point.

Set **Print Quality** to **Photo—1,440 dpi**.

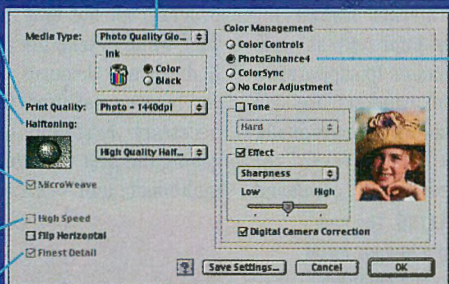
Set **Halftoning** to **High Quality**.

Make sure you have **MicroWeave** checked to avoid banding problems.

Uncheck **High Speed**.

Check **Finest Detail**.

Select **Photo Quality Glossy Film**—the media you should be using for killer prints.



We used Epson's **PhotoEnhance 4** to do some final postprocessing on the image before we printed it. We added some sharpness and digital camera correction. Feel free to experiment with these settings.

GOOD NEWS: Quiet printing. High-quality images. Reports ink usage. **BAD NEWS:** USB only. No cable supplied.



reviews

Global Village VideoFX

MULTIMEDIA

COMPANY: Boca Research

CONTACT: 800-336-2009 or 561-997-6227, <http://www.globalvillage.com>

PRICE: \$129.99 (SRP)

REQUIREMENTS: PowerMac with USB port, Mac OS 8.6 or later, 32MB of RAM, 15MB of free hard disk space plus room for 4MB per minute of video, CD-ROM drive, 16-bit 800 by 600 video

YOU CAN EDIT in the edit window, but don't expect to cut, copy, paste, add transitions, or save.



reviews

Global Village VideoFX provides an easy way to capture video from a FireWire-less camcorder into a USB Mac, but as a video-editing studio, it's a dog.

A translucent blue USB hub sends composite or S-Video output from any camcorder, DVD player, or VCR into any USB-equipped Macintosh. We captured 320-by-240-pixel video from our eight-year-old camcorder at a smooth frame rate.

While the hardware works fine, the Global Village VideoImpression software does not. It lacks menu items like Save, Open, and Print.

Indecipherable icons and strange menus are scattered throughout the small, unresizable windows. The New button lets you edit storyboards, and the Edit button does nothing at all. The lack of a Save Changes dialog box means you can quit and lose all changes without any warning. Command-S doesn't save, but clicking an antiquated floppy icon does.

The package includes a fairly decent photo editing app, but it has scant features. You can insert still images, shorten video clips (only by dragging handles, not by selecting and cutting), change their order,

and add titles—but that's it. Also, the application acted a bit buggy during our tests, leaving artifacts around the screen.

For video capture, VideoFX could have been a decent deal at one-third the price. But as a self-proclaimed "virtual video editing studio," we have to call VideoFX a major bust.—*Joseph O. Holmes*

GOOD NEWS: Adequate USB video capture. **BAD NEWS:** Inscrutable interface. Very limited video editing capabilities. Buggy.



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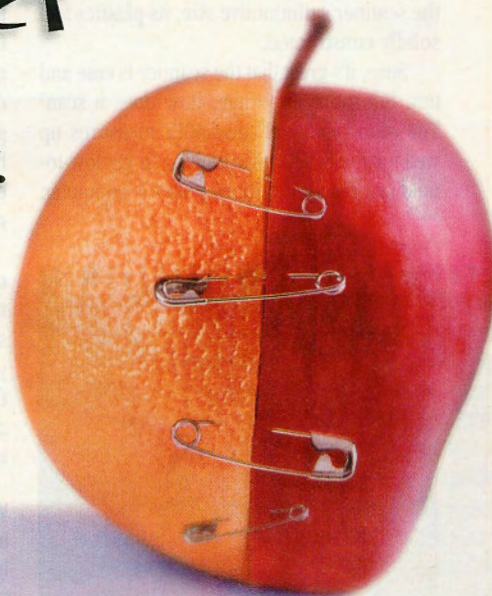
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reviews

CanoScan FB 630Ui Scanner

HARDWARE

COMPANY: Canon

CONTACT: 800-652-2666, <http://www.ccsi.canon.com>

PRICE: \$149 (SRP)

REQUIREMENTS: Mac OS 8.5 or later, 32MB of RAM, 50MB of hard disk space, 800 by 600 256-color monitor (minimum), 2X or faster CD-ROM drive, USB port

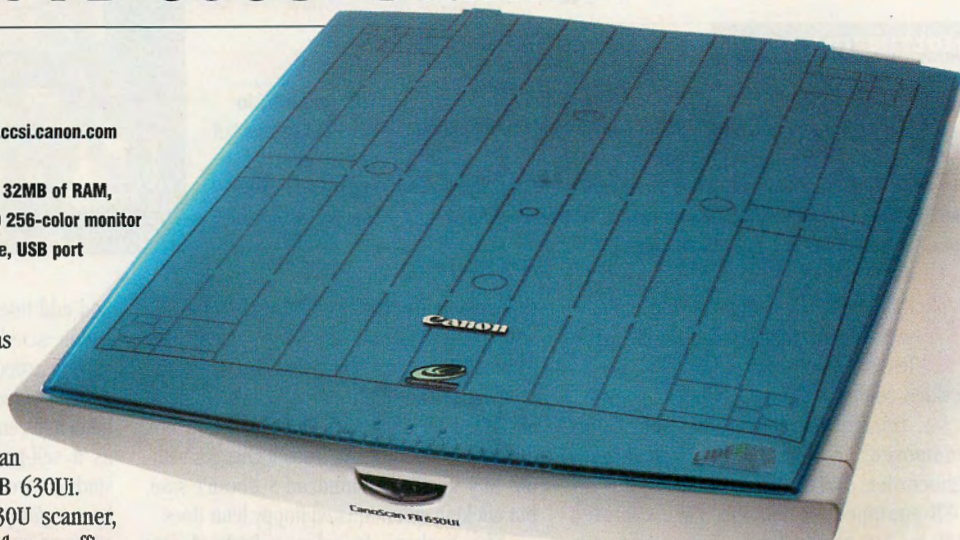
Apple's move to USB has spawned a wave of high-quality, low-cost peripherals, and no peripheral better exemplifies this trend than Canon's new USB CanoScan FB 630Ui. Based on Canon's PC-only 630U scanner, the 630Ui offers small office/home office (SOHO) users great scanning in a cute little package at a cute little price.

The 630Ui scanner is amazingly thin, standing just 1.5 inches tall, and occupies very little desk space. Its footprint measures 10.1 by 14.6 inches, only slightly larger than the 8.5-by-11.7-inch scanning area. The included lid is molded in an attractive iMac-matching blueberry, although you can purchase lids in any of the iMac colors. Despite the scanner's diminutive size, its plastics feel solidly constructed.

Sure, it's great that the scanner is cute and tiny, but more important, how does it scan? The scan quality of the 630Ui measures up well for the SOHO user looking to get low-to-medium resolution images into a computer.

THE ONE-CLICK WONDER SOFTWARE BUNDLE

Canon did a great job of including the right applications with the 630Ui, but what really sets the CanoScan bundle apart is the CanoScan Toolbox. The Toolbox puts you just one click away from scanning, photocopying, or faxing a document from your scanner. Clicking the Print button brings up a dialog box that sets the page dimensions, print quality, and number of copies. Click OK, and the 630Ui scans and spools the image to your printer without any additional assistance. If you have your fax-modem set up properly, just click once and whatever you have on the 630Ui becomes an electronic transmission. The Toolbox is also a mini version of the Launcher—you can assign the open spaces in its tool lineup to other apps you might use with your scanner—Adobe Photoshop, for example.



PHOTOGRAPH BY AARON LAUER

THE CANOSCAN FB 630Ui IS PERFECT for SOHO use—it is small, affordable, and offers excellent scanning quality in an attractive package.

Scanning at 72 dpi, the 630Ui delivered crisp edges, excellent color reproduction, and perfect image quality. The built-in 600-by-1,200-dpi optical resolution is more than adequate for Web or multimedia work and most non-professional publishing jobs. If you need higher resolution, you can squeeze 9,600 by 9,600 dpi out of this machine with interpolation, but image sharpness begins to degrade. Crisp lines in your original, scanned at the maximum 9,600 by 9,600 dpi, tend to look dirty or smudged. In areas with subtle color gradients, the scanner also tends to introduce banding or color steps, occasionally introducing stray colored pixels. This occurred more often as we approached the maximum.

Scanning time for a letter-size, photo-quality image at 300 dpi was just under 3 minutes—slightly longer than that of other scanners in the same price range. But when you consider the image quality you get for the price, it's easy to forgive the sluggishness. In terms of clarity and color accuracy, images scanned within the 630Ui's optical

range (600 by 1,200 dpi) easily equal the products of more expensive scanners.

Plus, you only have to connect one USB cable—that's right, *one* cable. The CanoScan FB 630Ui doesn't have a separate power supply and draws power from the USB bus itself. This simplification goes a long way toward helping the cable management-impaired. The downside, however, is that a number of devices drawing power off the same USB bus—say, the scanner, a floppy drive, and a joystick—may prevent your port from powering all the items at once. We didn't run into this problem, but it is a possibility.

Canon's new CanoScan FB 630Ui has a lot going for it: a low price, small size, excellent color reproduction, and only one cable. We put the 630Ui through its paces on both a new G4 and an original iMac with practically the same performance and encountered no problems. Throw in Canon's easy-to-use software bundle and this scanner is a definite winner.—Rick Sanchez

GOOD NEWS: Small footprint. Draws power from USB port. Good software bundle. **BAD NEWS:** Slower-than-average scanning time.



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Pro-Media 3025

HARDWARE

COMPANY: Diamond Audio

CONTACT: 310-582-1121, <http://www.diamondaudio.com>

PRICE: \$69.99 (SRP)

REQUIREMENTS: Any computer or audio device with a standard 1/8-inch audio-out port



PHOTOGRAPH BY AARON LAUER

Although MP3s have increased the demand for audio hardware, most Macs don't ship with a system capable of doing justice to modern game sound—let alone digital music. Diamond Audio is trying to become the leader in computer sound, and its Pro-Media line is a great start.

The Pro-Media 3025 consists of a subwoofer and two satellite speakers, with a gray finish that matches the graphite G4 and SE computers nicely. The 3025 is not the most powerful system at this price level—all three speakers combined have only 25 watts of power output, compared to the 51 watts from the Monsoon MH-500 (about \$100). How-

NO FRUIT FLAVORS HERE—the Pro-Media 3025 system looks gorgeous next to a G4.

ever, the 3025 has more than enough features to compensate. The Monsoons, for example, always emit a loud pop when activated—an undesirable “feature” distinctly absent from the Pro-Medias. The Pro-Medias also feature a DLP (Distortion-Limiting Processor). With it, we nearly maxed out the volume before hearing any distortion.

A few dark spots tarnish this otherwise awesome finish. Though the system features an independent volume control, there's no way to see what the volume setting is; in testing, this led to more than one painfully loud startup chime. Sound quality is also some-

what...well, *odd*. Though sharp and distortion free, the sound was not as rich as that of the Monsoon MH-500. The equalizer in our MP3 player could compensate, but it took some fiddling. Still, other comparable systems invariably cost more. For day-to-day use, the Pro-Media 3025 is an awesome value.—*Rich Pizor*

GOOD NEWS: Almost distortion free. Subwoofer kicks. MP3s sound awesome. Great value.

BAD NEWS: No visual volume indicator. Sound is not as rich as some other systems'.



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HP DeskJet 1220C Professional Series

HARDWARE

COMPANY: Hewlett-Packard

CONTACT: 800-752-0900, <http://www.hp.com>

PRICE: \$499 (SRP)

REQUIREMENTS: Mac OS 8.1 or later, USB connection

For the \$500 price tag of Hewlett-Packard's DeskJet 1220C Professional Series printer, you get more than beautiful color prints—after all, you can buy photo-quality output for much less. This large-format printer puts the same beautiful color on sheets as big as 13 by 19 inches and opens up creative possibilities that wouldn't fit within the confines of letter-size paper.

The DeskJet 1220C can yield stunning output. We printed our benchmark image on special photo paper at the 1220C's highest photo resolution of 2400 by 1200 dpi. The result was a lab-quality photo—sharp, clear, and bright, with excellent contrast and no visible banding or artifacts of any kind. Color output on cheap copier paper yielded surprisingly good contrast and bright colors. Black text on quality inkjet paper looked almost as sharp as the output from our 600-dpi LaserWriter 6/400, even at small type sizes. Print speed is slow, but within the range of an inkjet printer. The 1220C finished printing a full 8-by-10-inch color photo at Normal quality in 2.5 minutes, and single-spaced black text at the rate of 3 pages per minute.



PHOTOGRAPH BY AARON LAUER

HEY, BIG FELLA. HP's 1220C large-format printer frees you from the mundane confines of the 8.5 by 11 page.

HP says the printer can handle 5,000 pages per month, and its paper tray holds 150 sheets. Compared with other HP DeskJets, the 1220C is enormous, measuring two feet wide and more than two feet deep with trays unfolded. If you plan to use its straight-through print path, which can handle up to 67-pound stock, you'll need considerable space at the rear of the printer. And at 22 pounds, it's much heavier than the typical 13-pound DeskJet.

The 1220C comes equipped with a convenient Cancel button to end a job immediately and low-ink warnings so you can buy new cartridges before the old ones die. One feature we miss, however, is the special photo tray found on other HP DeskJets. The tray

holds 4 by 6 sheets, allowing you to print photo snapshots without unloading your regular paper. The USB connection worked flawlessly, but there's no option for a serial connection for non-USB Macs.

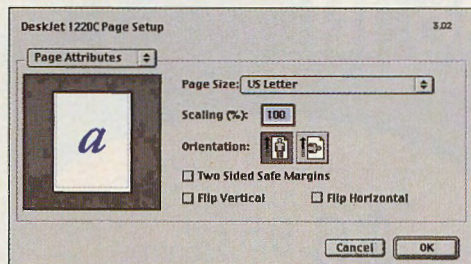
If your main use for an inkjet printer is printing high-quality color photos and letter-size pages, you can easily find a less expensive solution. If you need to print large-format color or if you've got the extra cash to experiment with roomier projects, the HP 1220C offers outstanding quality at a home-office price.—*Joseph O. Holmes*

GOOD NEWS: Photo-quality printing. Laser-sharp text. Large-format sheets. **BAD NEWS:** No serial port. No separate 4 by 6 paper tray. Large footprint.

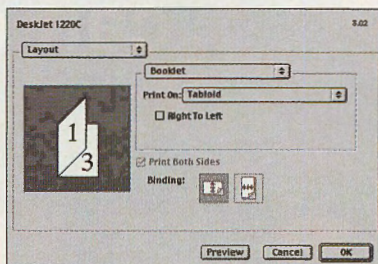


Fine Dining with the HP1220C

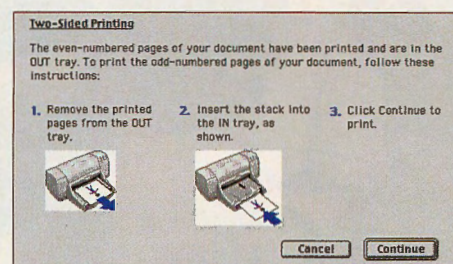
A large-format printer can output sheets that you can fold into letter-size booklets to resemble a four-page restaurant menu. Now all you have to do is cook.



1 Lay out your four 8.5-by-11-inch pages normally in your favorite page layout application. There's no need to anticipate the booklet arrangement—the HP 1220C's Page Setup feature should detect the size of each book page, so you can ignore the fact that you'll be printing on a large 11 by 17 sheet. Just choose letter-size in the Page Setup dialog box.



2 When you're ready to print, open the Print dialog box, select Layout from the pop-up menu, then select Booklet from the layout choices and Tabloid from the Print On menu. Preview your work to check its appearance. The printer knows exactly how to place each page on the sheet.



3 Load paper into your printer. After the first side prints, follow the instructions in the alert box to print the second side. The pages will be arranged so you can fold the sheet in the middle, creating a letter-size, menu-style booklet. Follow the same steps to create a book with any number of pages. Unfortunately, the 1220C can't help you in the kitchen.

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Spark 1.5

MULTIMEDIA

COMPANY: TC Works

CONTACT: 805-373-1828, <http://www.tcworks.de>

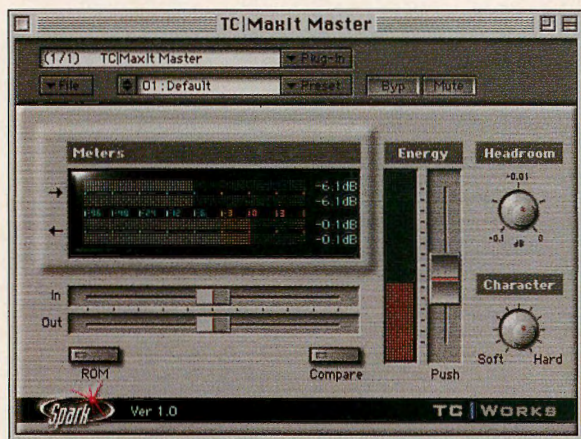
PRICE: \$499.95 (SRP)

REQUIREMENTS: PowerPC, 166MHz 604 or faster (G3 or G4 recommended), Mac OS 8.1 or later, 64MB of RAM, 20MB of free hard disk space, (ASIO-compatible sound card recommended)



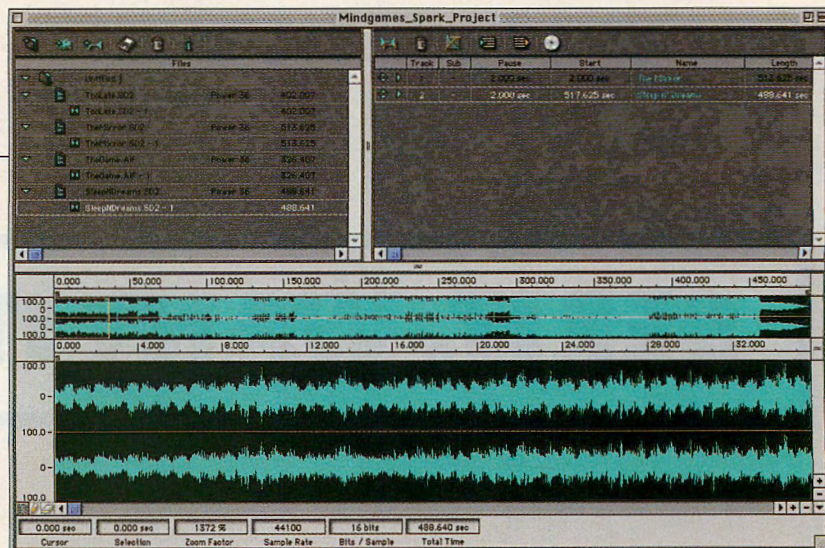
FIND A
DEMO of
Spark 1.5
on The Disc.

TC Works launched Spark as its Mac-only, audio editing and mastering solution based on VST (Virtual Studio Technology). Serious sound engineers will love its deep mastering capabilities and VST plug-ins. Beginners will find its vast interface and steep price daunting. Spark 1.5's powerful editing capabilities justify the steep learning curve, however, and the included set of high-quality TC Works VST plug-ins is worth the price of the program. Add Adaptec's Toast Pro to that bundle, and you have a super deal.



PLUG-INS SOUND GREAT right out of the box—no tweaking required.

Spark improves the sound of mono and stereo audio via its VST mastering plug-ins. Probably the strongest attribute of Spark is its mastering capability, which adjusts the levels, tone, and spacing between songs so that they flow together as a cohesive whole. Spark supports the most common audio formats, including AIFF, SDII (Sound Designer), WAV, and of course MP3 (you must convert MP3 files to an uncompressed format such as AIFF before loading them into Spark). We used Spark to extract two songs from an audio CD, add VST effects to them, and chain them together with cross-fades, creating a Toast disc image for CD burning.



THREE—THAT'S THE MAGIC NUMBER. This three-panel view controls the majority of your audio work in Spark.

Spark aims to integrate the vast span of audio editing, processing, and mastering controls into a concise interface consisting of two windows and a transport controller. The first window, the Browser view, consists of three panels: The Wave Editor edits audio and creates regions, the File View contains a database of all the audio files and regions used in a project, and the Playlist arranges regions and defines cross-fades. The second window is the Master View, where you handle all audio processing (such as boosting audio levels and adding reverberation and echo). You can execute most menu commands easily by clicking screen icons—unless you read the manual, though, the icons won't mean much. Though the manual isn't bad, we found ourselves looking into other resources for certain terms it failed to define (what's a DC offset?).

Spark shines by bundling a great set of VST plug-ins. Similar to Photoshop plug-ins, these give the program additional effects. Spark includes TC Native CL, MaxIt, and common audio-tweaking tools such as reverb, EQ, and delay. For export to CD, Spark comes with Adaptec Toast. You can export your audio into MP3 utilizing the Fraunhofer codec, considered the best-quality compression algorithm for MP3. The inclusion of a batch audio converter allows you to use Spark as your main MP3 encoder.

Spark's VST capabilities make it a good value for audio professionals, but it takes a little getting used to. Specifically, Spark uses

"destructive editing"—any processing you perform alters the original file. Also, VST plug-ins occur in real time, which means you instantly hear the effect without first having to process the audio file. This can be a trifle confusing. Suppose you use a reverb effect on an audio file and want to burn it to CD. You hear the effect while you're editing, but until you press the Create File button, the disc image does not include that effect. We had to reference the manual a few times to figure this out.

Bias Peak users may wonder what the Spark hubbub is about—at this point, not much in terms of features. Both Spark and Peak do just about the same tasks very similarly. The plug-in formats are one minor difference (Spark uses VST while Peak uses Adobe Premiere). These two programs are head to head in the race for the title of best Mac-based, two-track audio editing application. Spark is still young, and we expect more from TC Works in the near future.

The VST features alone make Spark worth the money. We recommend trying a demo version first, though, because it's not for everybody (you can download it from <http://www.tcworks.de/download.htm>—you must have Mac OS 8.5, however). If you are serious about audio editing and mastering, Spark 1.5 is a great investment.—Andrew Tokuda

GOOD NEWS: Fraunhofer codec for MP3 encoding. Support for third-party VST plug-ins. Includes Adaptec Toast. Quality TC Works plug-ins included.

BAD NEWS: Unintuitive icons. Manual could use its own tutorial.



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That's Infotainment!

Stephen King's F13

COMPANY: Blue Byte Software

CONTACT: 800-933-2983 or 512-343-1099, <http://www.frightware.com>

PRICE: \$29.95 (SRP)

REQUIREMENTS: PowerPC, 80MHz or faster; System 7.5 or later; 32MB of RAM; 300MB of free hard disk space



We started off skeptical. But then, as we customized our Mac into a virtual haunted house, this program grew on us. Stephen King's F13 is an interactive CD that possesses your computer with freaky pictures, sounds, and games. Simplistic and somewhat overpriced, it nevertheless works—sort of.

Games range from the lame (passively dropping animals into a piranha tank) to the inexplicably amusing (chasing and smashing bugs with a rolled-up newspaper). You can choose from any number of screen savers, and spooky pictures (such as floating eyeballs). Sounds complete the ambiance. Admittedly, it's fun opening up your email to the sound of ripping flesh.

The CD also features a full version of King's novella "Everything's Eternal," which has never been distributed in book form—a bonus except that there's no option to print out the text, so your poor eyes will have to resign to reading it onscreen. Overall, the CD is a bit thin on content and overpriced for what it offers, although Stephen King fanatics may still find it a scream.—*Cathy Lu*

Midnight Play

COMPANY: Simon & Schuster Interactive

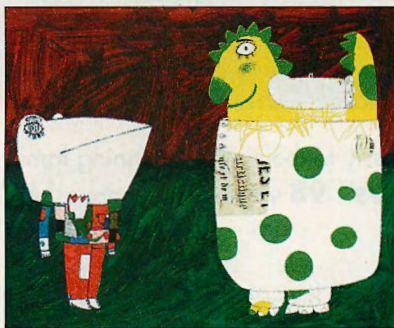
CONTACT: 800-223-2336, <http://www.simonays.com>

PRICE: \$15 (SRP)

REQUIREMENTS: PowerPC, System 7.5.3 or later, 16MB of RAM, 12MB of free hard disk space, 4X CD-ROM drive



Midnight Play is what Simon & Schuster calls "a spontaneous interactive fantasy." Fantasy? Perhaps. Spontaneous and interactive? That description is somewhat loose.



DON'T LET LOOKS DECEIVE YOU. Midnight Play is nothing more than eye candy.

Based on art by Kveta Pacovska, a Czechoslovakian children's book illustrator, Midnight Play incorporates but a crumb of interactivity into a large series of pictures. The CD takes kids through images, allowing them the opportunity to use each as a digital playground. However, unlike the Jungle Gym, which provides hours of fun, Midnight Play will have kids bored to tears.

For instance, one screen displays the head and torso of a giant clown lying on its side. By clicking and dragging with their mouse, kids can pull the clown back and forth to view the rest of his body. Whoop-de-doo. Activities like these are fascinating for about eight seconds. The program presents scenarios one after the other without offering the player a choice about where to go next—a moot point anyway, since the game is such a yawn. If clowns amuse your kids, take them to the circus. If Pacovska's colorful artwork fascinates them, buy the books. Just don't bother with this CD.—*Cathy Lu*

American Civil War Soldier

COMPANY: by Design

CONTACT: 800-527-7472 or 608-592-7732, <http://members.aol.com/designinc>

PRICE: \$44.95 (SRP)

REQUIREMENTS: Mac 68030 or later, System 7 or later, 10MB of RAM, 40MB of free hard disk space, 2X CD-ROM



American Civil War Soldier places you on the very soil where the Blue and the Gray fought. If you like the slow, drawn-out workings of turn-based strategy games, you may enjoy this game's attempts at authenticity. You can play as the Union or the Confederacy and battle it out in places like Gettysburg and Antietam.

Unfortunately, low production quality plagues this game. American Civil War Soldier is full of spelling inaccuracies (Brigade is spelled Briagde and Captain is spelled Captin), and the graphics look as dated as a 1980s mullet 'do. Background scenery resembles the ugly desktop patterns installed with Windows 95, and buildings look like virtual Legos. Your mouse is a clunky way to move around the battlefield, plus sometimes your troops won't fire—whether they're wounded, reloading, or out of ammo is anybody's guess.


One feature does work, however: Click a unit to read about each soldier's rank and gun type. And although we can't testify to the historical accuracy of the information, it is a nice touch that you can participate in real battles. It's just a shame that some of this detail didn't carry over into other areas of the program.—*Cathy Lu*



THE GRAPHICS LOOK as if they never made it out of the early '90s. The turn-based gameplay didn't make it, either.



IT'S WHACK-A-MOLE but with dead people. Weird.



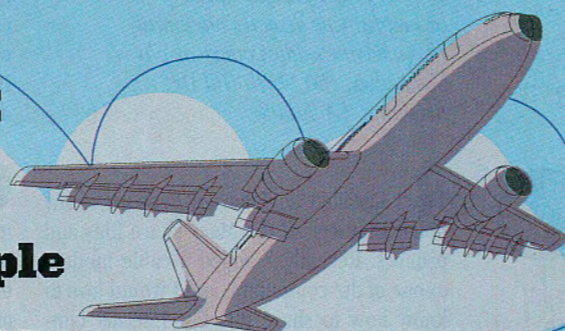
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Q I installed an Ethernet network in my house that lets all the Macs share files and printers. Recently, I added a cable modem to one of the computers, and I would love to know how to share this fast Internet connection with the rest of my Macs. I've been told I need a router—is this true?

A The few, the proud, the home networked! An Ethernet-connected household with a cable or DSL modem is a beautiful thing. As for getting all of your computers on the Internet, you will need what is commonly (and often mistakenly) called a router. A true router is a piece of hardware that forwards packets of information from one network to another network. In other words, it routes information to the right place.

These days, routers do much more than just route data—they can also help you connect your network to the Internet. A more correct term for this device in relation to small office and home networks would be a multipurpose network device, aka an Internet access router. This device connects to your cable modem and to the Internet, and gives your networked computers the IP addresses they need in order to access the Internet.

You'll also find software solutions, such as the Vicomsoft Internet Gateway (<http://www.vicomsoft.com>), in which a computer acts as the access router, but there are a couple of good—and more economical—hardware solutions. MacSense offers one, called the XRouter (<http://www.macsensetech.com>); another is the Linksys Etherfast (<http://www.linksys.com>). These devices work by using a built-in DHCP client to obtain a single IP address from your cable or DSL ISP.

They then perform a Network Address Translation (NAT) and create IP addresses for the rest of your network so every Mac can access the Internet. You'll find a great online resource for information about Internet access routers at <http://www.macintouch.com/accessrouters.html>.

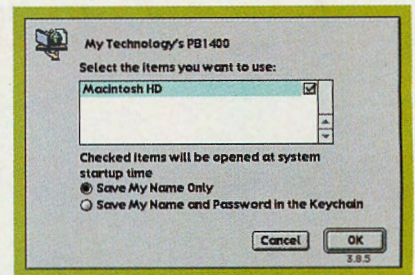
Q When I turn on my computer at school, it asks me to log in to a server. The problem is, it always has somebody else's name written in the box. I just click the Cancel button and my computer works fine. I can't get rid of this dialog box, though! How can I make it not appear every time?

A Everyone with a computer on an AppleTalk network has dealt with this pesky dialog box. The AppleShare extension generates the box as it loads—AppleShare is trying to mount a volume at startup. Checking the Mount Volume At Startup radio button when mounting a server from the Chooser instigates the appearance of this box. It is not uncommon for users to turn on this feature by accident.

You can get rid of the function in two ways. First, if you know the user's log-in name and password, you can log in to the server again and uncheck the box. Otherwise, simply trash the AppleShare Prep file located in the Preferences folder. This is safe—your computer will create a new file at startup, minus any information about mounting volumes.

Q I use both Netscape Communicator and Internet Explorer to surf the Web. The trouble is, they both have their own bookmarks. Is there a way to synchronize the bookmarks from both programs?

A You betcha! The secret is to use aliases. Make an alias of the Bookmarks.html file in

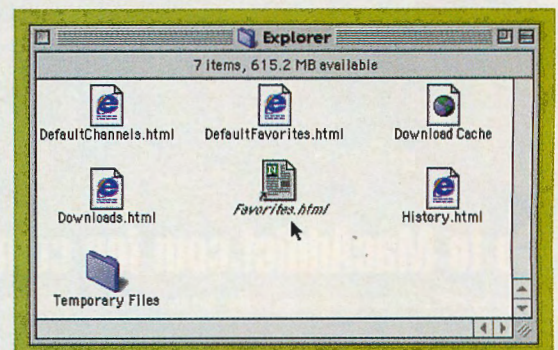


CHECKING THIS BOX may lead to annoyance and trouble for someone down the road!

the Netscape Users folder, which you'll find in your Preferences folder. Put this alias in the Explorer folder, likewise located in the Preferences folder. Delete the Favorites.html file and rename the Bookmarks.html alias, calling it Favorites.html. Now both browsers will use the same file and have the same bookmarks!

The Bookmarks.html file now contains all of your bookmarks, so if you have lots of important ones you want to save, just make a copy of that file and tuck it away for safekeeping. You could even transfer it to another computer so they have the same bookmarks (but remember that the alias trick only works if the two folders are located on the same computer).

Q The new iMacs and iBooks have a great new peripheral called the AirPort, which enables them to use wireless networking to



A SINGLE FILE in each browser contains all your bookmarks; pick one, make an alias of it, and use it with the "other" browser.

access the Internet. My year-old PowerBook G3 cannot use the new AirPort card. How can I get wireless Internet with my PowerBook?

A Though Apple currently does not offer an AirPort option for pre-2000 PowerBook G3s, there's still a way to connect an older PowerBook to the Internet via a wireless network with an AirPort base station. The most promising third-party solution comes from the very Mac-friendly company Farallon (<http://www.farallon.com>), and it costs \$249. This device is a PC Card called the SkyLine, which enables 2400, 3400, and G3 PowerBooks to access network services via an AirPort base station just as an iBook does. In fact, the company's new technology actually enables its PC Cards to run faster than Apple's AirPort cards.

There are some other wireless PC Cards available, such as the Orinoco (formerly WaveLAN) PC Card from Lucent Technologies (<http://www.wavelan.com>), but these are designed mainly for use with PCs. Some people have managed to get these cards to work, but you may not find true Mac technical support if you run into trouble. Always check with the company—many are in the process of adding Macintosh support.

Q I just backed up thousands of email messages to a CD using my new CD burner and Adaptec's Toast software. When I try to index all the messages with Sherlock so I can search by content, my CD does not show up as an indexable volume. Since I can't index it, I also can't search it by content. Did I do something wrong? How can I create CDs I can search by content?

A You didn't do anything wrong. However, you need to take some very important steps *before* you burn a CD in order to make it searchable. First, you must understand how Sherlock's indexing works. Sherlock works by creating an invisible index file at the root of the volume it's indexing. When you search by content, Sherlock reads from this file and lets you know which indexed files contain the content you're looking for. Sherlock does not create this index on its own. You must manually index volumes from within the Sherlock application by selecting Create Index from the Find menu. Since a CD is a locked volume, it cannot create this index file, so to create a searchable CD, you must create the index *before* burning the CD.

To do this, place all the files you want to burn in one folder. Use the free disk image creation utility, Apple Disk Copy (<http://asu.info.apple.com/swupdates.nsf/artnum>

Updates and Corrections

In the March *Ask Us* column, we mentioned some shareware programs that created Web pages with pictures, complete with thumbnail views. However, we failed to mention a great *free* piece of software called PhotoPage (<http://waves.apple.com/people/jav/PhotoPage.html>) by John A. Vink. Great work, John!

We also mentioned a product called the iTVView Gold by Focus Enhancements in the March issue. We mistakenly wrote that it is

a USB device—it is not. Eskape Labs (<http://www.eskapelabs.com>) also sells a USB video-mirroring device called MyView. This wonderful device lets you mirror the computer screen of your USB Mac or iBook onto a TV or VCR!

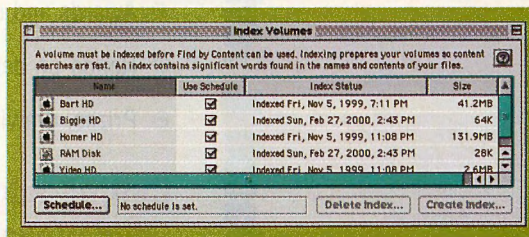
Another company hard at work creating a USB video-out solution is AverMedia MicroSystems (<http://www.avermicro.com>). It makes the USBPresenter and iMaxEdit devices—very cool!

/n11162) to create a read-write disk image from this folder by dragging it onto the Disk Copy icon. Then mount the disk image and index it with Sherlock. After Sherlock indexes it, launch Toast and drag the mounted disk image volume into the Toast window so it creates a Mac volume, not files and folders. After you burn the CD, you will be able to search it for content.

Q My family just purchased a new iMac DV and we love it, but the coolest thing about it is the iMovie software, which lets us create our own movies! Unfortunately, our old camcorder is not digital, so we can't hook it up to our iMac. How can we start creating great iMovies with the old camcorder?

A DV stands for digital video, a video format new digital camcorders use. DV enables camcorders to record at higher resolutions with greater clarity than older camcorders and without degradation in video quality over time. However, the real crowning jewel in DV camcorders is their ability to use FireWire to transfer video into a computer. Your iMac DV comes equipped with two FireWire ports, which you can connect to DV camcorders for painless video transfer. The camera sends an all-digital DV stream to the computer, so the footage will look the same on the computer as it does on the camera. When you have finished creating your movie, you can also transfer it back to the camera over the same FireWire cable.

The iMac DV is a great video tool for digital camcorders with iMovie and FireWire—but what about older camcorders, you ask? First, here's a little background on how older, non-DV systems captured video (and still do in most cases). Because older video formats are not wholly digital (they consist of waves rather than 1s and 0s), you need to digitize footage before you can start editing.



INDEX YOUR DRIVES and you can search the contents of a file, not just find it by name.

This used to require a really fast computer (expensive), a really fast hard drive or RAID system (expensive), and a video capture card (also expensive). In other words, you needed to have lots of expensive equipment and lots of patience.

Apple has definitely made huge strides in creating affordable, high-quality video production with its iMac DV computers. You can take advantage of iMovie using older, nondigital camcorders, but you will need some extra hardware. The most cost-effective solution is a USB video capture device. There are a few inexpensive options, including the InterView from XLR8 (<http://www.xlr8.com>) and the MyCapture from Eskape Labs (<http://www.eskapelabs.com>), both of which let you capture video and import it into iMovie. The problem with these devices is that they limit you to a capture size of 320 by 480; scaling this back to 720 by 480 (iMovie-DV scale) causes noticeable artifacts to appear. Plus, you cannot send the movie back to your camcorder.

The best solution is a little pricey—at around \$400, the Sony DVMC-DA1 Analog to Digital Media Converter (<http://www.sel.sony.com/SEL/consumer/ss5/home/digitalvideo/minidvcamcordersproducts/dvmc-da1.shtml>) will turn your analog tapes into FireWire-accessible DV. Prices for new technology inevitably keep dropping, however, and digital camcorder prices will be no exception.

Buz Zoller is a technology support specialist for a school district in Texas.

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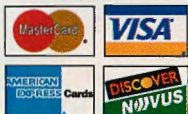
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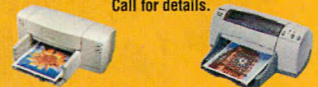
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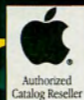
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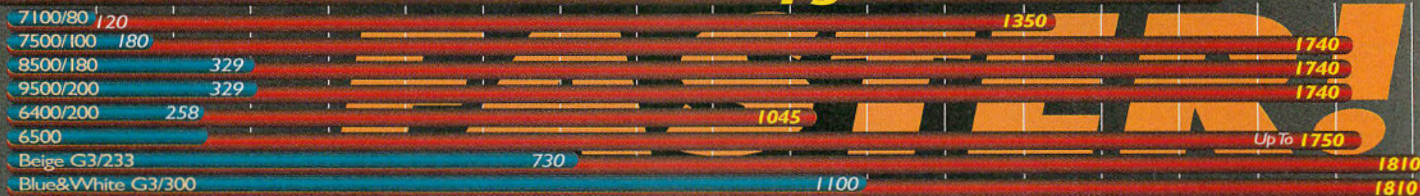
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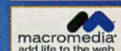
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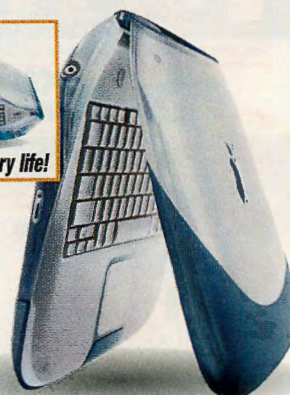
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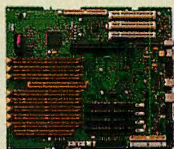
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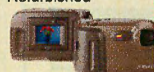
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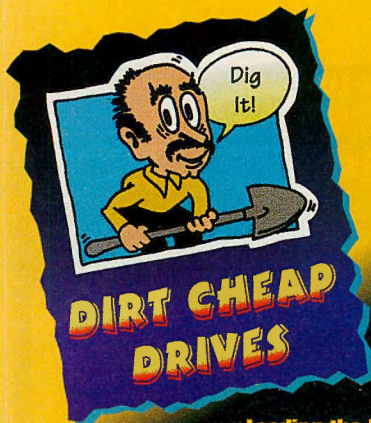
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18.2GB	2MB	7,200	IBM318350W	\$335
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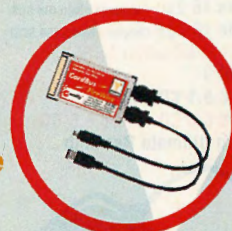


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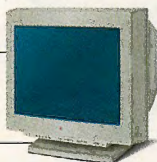
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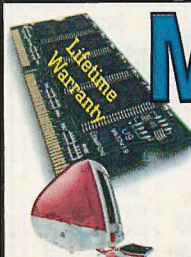
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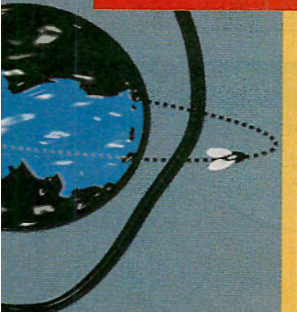
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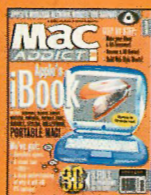
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shut down

See what happens when caffeine and NyQuil collide?

shutdown

Gentrification

WackSoft is proud to announce Gentrification: The Wacky Urban Renewal Game, the first sim to enable players to take over a crime-ridden ghetto and turn it into an elite, upscale neighborhood.

Urban Renewal Lets You:

- Open coffeehouses to attract wealthy go-getters!
- Lobby City Hall to void rent control!
- Place trendy bars where once there were only rundown churches!
- Throw out unneeded neighborhood businesses to make room for live-work lofts!
- Petition large commercial chains such as Starbucks and Blockbuster to open stores!



LET'S SEE...some curtains, a little paint, and that burn has got to go!

Be Careful, Though:

- Move too fast and your yuppies may get mugged!
- Reactionary neighborhood activists can block key legislation!
- Unwanted elements such as families and aging hippies may find your haven attractive!

News Stories We Thought We Read Somewhere...

Microsoft and Amazon Form Strategic Alliance on the English Language

Merger buoys dictionary maker's stock price

BOGOVILLE, MN—After a lengthy semantics battle between Microsoft and America Online, the two companies announced a strategic alliance yesterday in which both companies will use

Merriam Webster's Collegiate Dictionary as the definitive source of all words except the word *monopoly*. As of press time, each company is still choosing to use its own definition of *monopoly*, but according to inside sources, AOL may agree to Microsoft's definition. Merriam Webster's stock shot up 3 1/4 points.

Late Rapper Accuses Computer Maker of Trademark Infringement

Lawsuit could pop a cap in Compaq's Q4 earnings

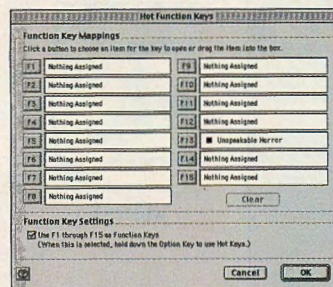
LOS ANGELES—The estate of rap artist Tupac Shakur is considering suing Compaq computer over its use of the name iPaq for its new computer platform, according to sources close to

the late rapper's management. Neither party could be reached at press time, but analysts downgraded Compaq's rating from good to crappy on the heels of the announcement.

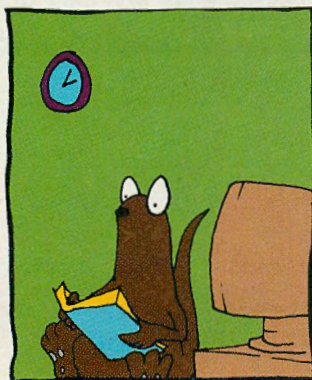
The lawsuit follows Apple's trademark lawsuit against Future Power and Daewoo over the eOne iMac lookalike.

Force-Quitting the Unspeakable Horror

A recently released Stephen King CD-ROM has caused several readers concern over the accidental release of Unspeakable Horror when they press the F13 key. To avoid this problem, simply open the Keyboard control panel, click the Function Keys button, and choose something other than Unspeakable Horror for the F13 key—we chose to take a screen shot with it instead.



CHANGE THE F13 setting to avoid unleashing unspeakable horror.



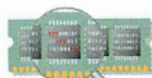
Visit the Fitzpatrick archive at <http://www.insanely-great.com/comic/index.html>.

BY CHUCK DOWNS

The Seven Deadly Macintosh Sins:



Software Conflicts



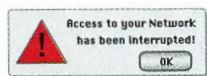
Memory Problems



Viruses



Hardware Problems



Network Problems



Disk Damage



Damaged Software

Salvation:



When good Macs go bad and fall from grace, it's good to know there's help nearby. Salvation is only a mouse-click away with the new TechTool Pro 3. Now featuring virus protection and conflict detection, TechTool Pro is the only program you need to help abolish the evil forces that have possessed your Macintosh. TechTool Pro 3 checks more aspects of your Macintosh than any other utility available. Period. Besides repairing and recovering damaged drives, eradicating viruses and catching the occasional software conflict; you can also test all those other critical parts of your system that other utilities simply ignore. Like RAM, logic board components, floppy drives, scanners, modems, internet connections and so much more. TechTool Pro even supports technologies like System 9.0.4, "Pure" HFS+, Firewire and USB drives, and all of the latest Macintosh models.

TechTool Pro can also help you in between times of trouble. Our disk and directory optimize features can help

improve the performance of your Macintosh as well as help circumvent problems before they happen. The TechTool Protection control panel will regularly check your system so you don't have to. It will also back up critical directory data, so if something goes wrong, you'll be up and running in no time flat.

But just because TechTool Pro is the most advanced Macintosh troubleshooting utility available doesn't mean that it has to be difficult to use. Our easy-to-use interface makes checking and fixing your Macintosh as easy as pressing one button. For advanced users, expert access allows you to control and configure TechTool Pro in almost any way you wish.

So if Macintosh troubles are turning your life into a living Hades, check out the tool of the trade: TechTool Pro. After all, you have the most powerful computer in the world. Shouldn't you be using the most powerful utility?

***Purchase TechTool Pro 2 now and receive a free upgrade to TechTool Pro 3 when it ships in Q2 2000!**

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